

Public Utilities

Volume 62 No. 2



July 17, 1958

In Two Sections — Section I

KEEPING UP WITH UTILITY RATE REGULATION

By Charles A. Ashby, Jr.

« »

Utility-Municipal Partnership in Water Supply

By Howard R. Drew

« »

What Can Be Done about the Right-of-way Problem?

By M. C. Westrate

« »

Some Critical Thoughts on Cost of Capital

By Leonard A. O'Connor



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Public Utilities

FORTNIGHTLY

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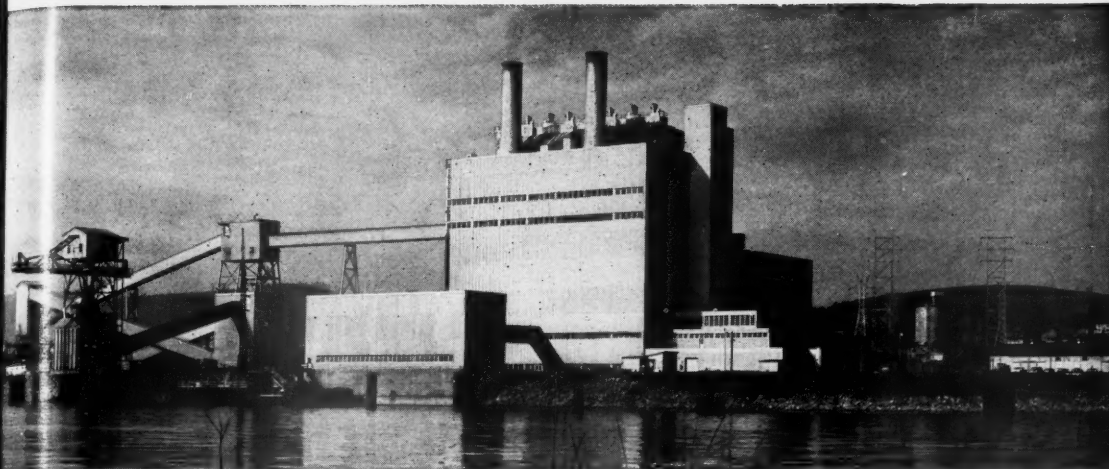
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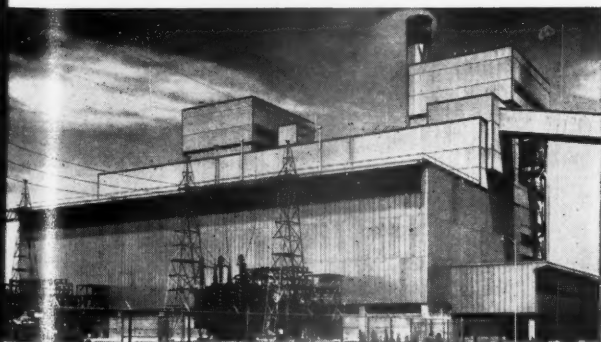
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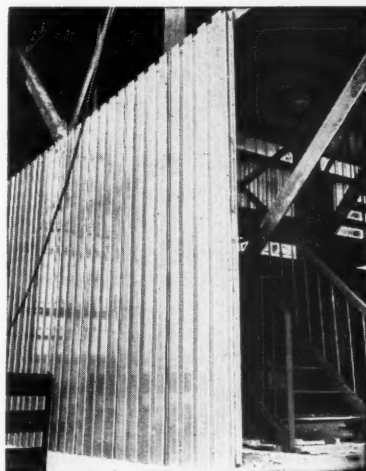
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Pages with the Editors

As we promised in our preceding issue, we are introducing with this issue a slightly different method of distributing the semiannual index to PUBLIC UTILITIES FORTNIGHTLY. With this (July 17th) issue, there will be found, slipped under the cover but not otherwise bound, the semiannual index to Volume 61, covering the first six months of 1958. In former years the semiannual index has been bound into the first issue following the completion of the volume. This practice, however, necessarily resulted in distributing the index bound into an issue belonging to a different volume.

So, to permit more flexible usage, especially for those subscribers accustomed to having their issues bound as library reference volumes, we are now distributing the semiannual index as a separate booklet. It may, in this way, be transferred to the volume to which it belongs, and may be bound either at the beginning or end of that volume, or otherwise used as the subscriber prefers.

* * * *

THE leading article in this issue comes to us from the manager of the rate department of an internationally known service organization. We think our readers will find it an excellent elementary dis-



CHARLES A. ASHBY, JR.



HOWARD R. DREW

cussion of problems involved in rate regulation and certain basic considerations which should be given weight by those charged with responsibility for preparing public utility rate cases. While readers may find that the groundwork covered is a familiar one, this author has a fresh and original method of restating guiding principles which shed new light on some well-known and long-standing problems.

THE author of this article is CHARLES A. ASHBY, JR., an electrical engineering graduate of the Georgia Institute of Technology (BS, '26). He is at present the rate department manager of Stone & Webster Service Corporation, which he joined in Boston in 1926. Subsequently he saw some service with the Blackstone Valley Gas & Electric Company of Pawtucket, Rhode Island, where he served until 1945. At that time he returned to Stone & Webster to take over his present duties. He is a member of the American Institute of Electrical Engineers.

* * * *

WHEN you stop to think about it, any use of the cost of capital in determining the rate of return for a regulated utility necessarily involves a certain degree of circular reasoning. Cost of capital depends, to a large extent, on earning ca-



Utility company load curve on a Monday for an August week.



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By **ROBERT P. THOMPSON**
Manager of Engineering, Transformers
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PAGES WITH THE EDITORS (Continued)

capacity. And a regulated utility's earning capacity (return allowed) depends on the cost of capital as determined by the regulatory authority. Does this result in a sort of built-in conflict, making the cost-of-capital approach defective for utility rate making? This forthright criticism is explored in the article "Some Critical Thoughts on Cost of Capital," which begins on page 93.

THE author, LEONARD A. O'CONNOR, is a graduate of the University of Massachusetts (BA, economics). He took a master's degree in economics (banking and finance) at the University of North Carolina, and was on the staff of the Securities and Exchange Commission in the public utilities division for a time. He is now on the controller's staff at the Connecticut Light & Power Co., working on tax and financial matters.

* * * *

THERE is a very definite community of interest between public utility companies of all kinds and the municipal government in their service areas with respect to the availability of adequate and suitable water supplies. This is becoming a problem of increasing importance and difficulty to cities and towns all over the country due to growing population, as well as growing per capita and industrial demand. But nowhere is the water supply situation more acute than in the state of Texas, which is the home of the author of this article, HOWARD R. DREW, senior engineer for the Texas Electric Service Company of Fort Worth. In his article beginning on page 81, MR. DREW shows how both the electric company and various communities in its system can benefit by co-ordinated planning and construction tied in with mutual research and other forms of municipal-utility co-operation.

MR. DREW joined the Texas company after obtaining his engineering degree from the University of Texas in 1948. Through his work in power plant design and location studies he became interested in the water supply problems this company shares with the cities and towns which it serves. This interest led to his



M. C. WESTRATE

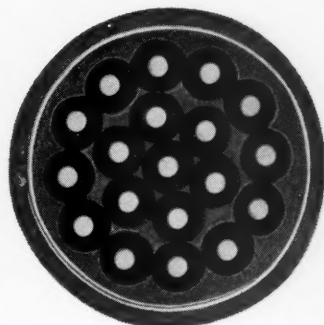
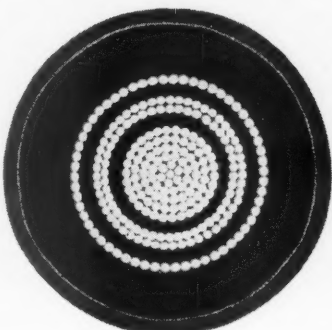
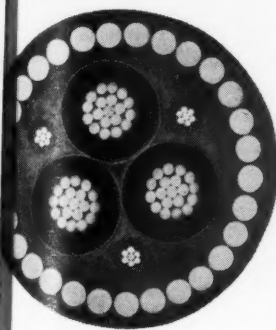
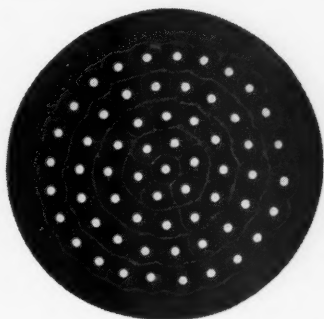
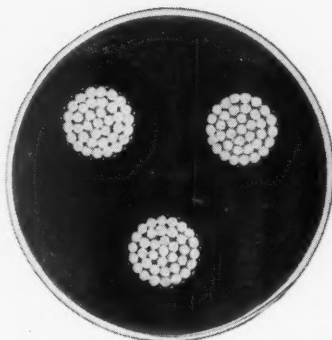
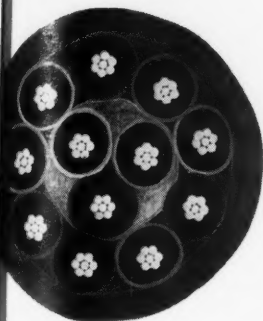
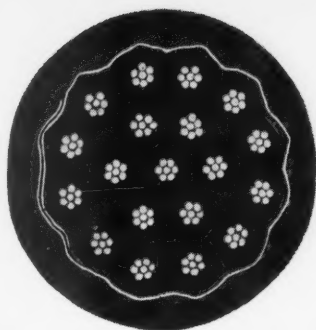
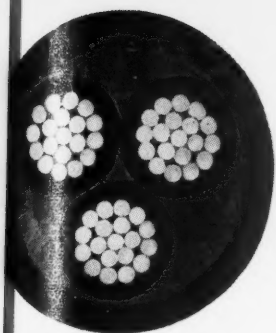
participation in several related activities in the general area of water research. When, in 1951, the governor of Texas appointed J. B. Thomas, president and general manager of the company, to head up a committee of 100 citizens to study the water problems of the state and to make recommendations for legislation in this field, MR. DREW acted as his aide in carrying out this assignment.

* * * *

THE author of the article on the right-of-way problem is M. C. WESTRATE, staff consulting engineer with Commonwealth Associates, Inc., of Jackson, Michigan. He is a native of that state and an engineering graduate of the University of Michigan (BS, '30). He started in the utility business with the Consumers Power Company and the old Commonwealth & Southern Corporation. In 1944 he became superintendent of public works for the city of Holland, which has a municipal generation and distribution system. In 1951 he returned to Commonwealth Associates, successor to the old Commonwealth & Southern Corporation, and has been very active in long-range planning for some of the largest electric systems in the Great Lakes area.

THE next number of this magazine will be out July 31st.

The Editors



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(July 31, 1958, issue)



WANTED—A PROGRAM TO EQUALIZE THE FLOW OF NEW SECURITIES

Willard F. Stanley, former utility executive and now a financial consultant in New York City, presents a very persuasive argument for the timing of sales of securities which should be of considerable interest to financial men as well as public utility officers. Too often public utility companies, and their underwriters as well, have had to absorb a certain amount of loss in proceeds simply because of market pressure due to flooding by simultaneous offerings which could have been avoided. What the situation needs, apparently, is some kind of a financial traffic policeman to keep the offerings moving in an orderly and better planned manner.

JOB BALANCE—A FRESH ANGLE IN UTILITY RELATIONS

Recession and unemployment have created a keen popular interest in the way communities are put together. Some are hard hit, others better off. Better balance in industries seems to be a definite factor. Utilities constantly build for community and load balance. They have a message for this new audience. James H. Collins, Washington author of articles about business and the utilities, has written a characteristically entertaining piece about the city conflicts and the way public utility companies have worked out their operating problems in community building. Readers will be amused at the description of the old-time rivalries between various cities and smaller towns.

UTILITY SUPERVISION DURING A PERIOD OF RECESSION

This article by Alfred M. Cooper of Indio, California, will be found very instructive to utility supervisors and their superior officers. It is interesting to note the author's reference to psychological factors which occur during a period of recession. Why is it that the "prima donna" and the ultrasensitive employee who is always ready to gripe or quit at the drop of a hat during periods of high employment and man-power deficiency, suddenly becomes very co-operative when the line forms at the unemployment compensation window? Mr. Cooper's article goes beyond public utilities and deals with nonutility business as well.



Also . . . Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.

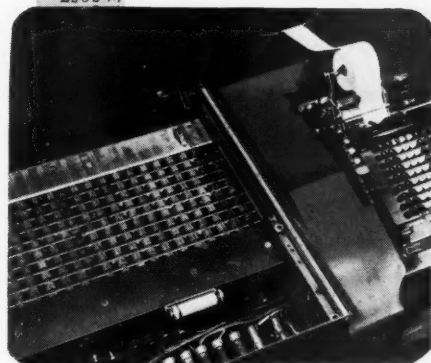
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*Former President of the United
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W. F. ROCKWELL, JR.
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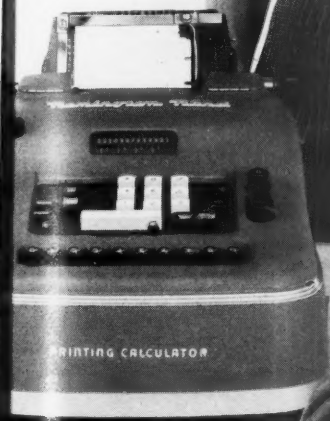
"... it is everyone's business—including local government, service organizations, fraternal orders, and private citizens—to foster a community spirit in which differences of opinion can be discussed, and resolved in an atmosphere of mature responsibility; a public opinion which looks upon irresponsible rashness—in either party to a dispute—as a serious disloyalty to one's neighbors."

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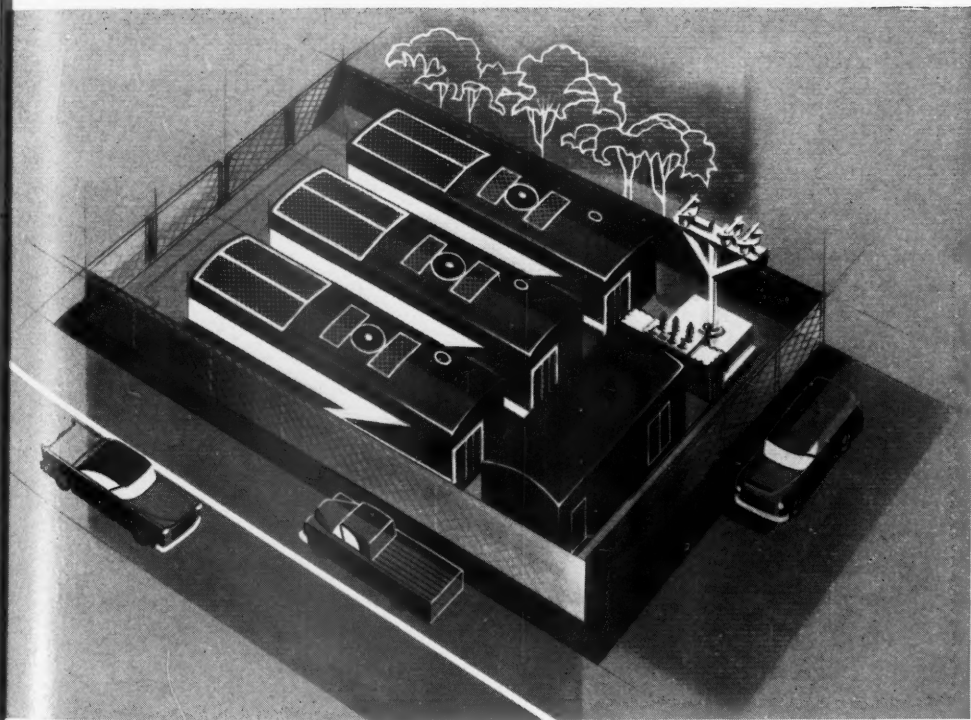
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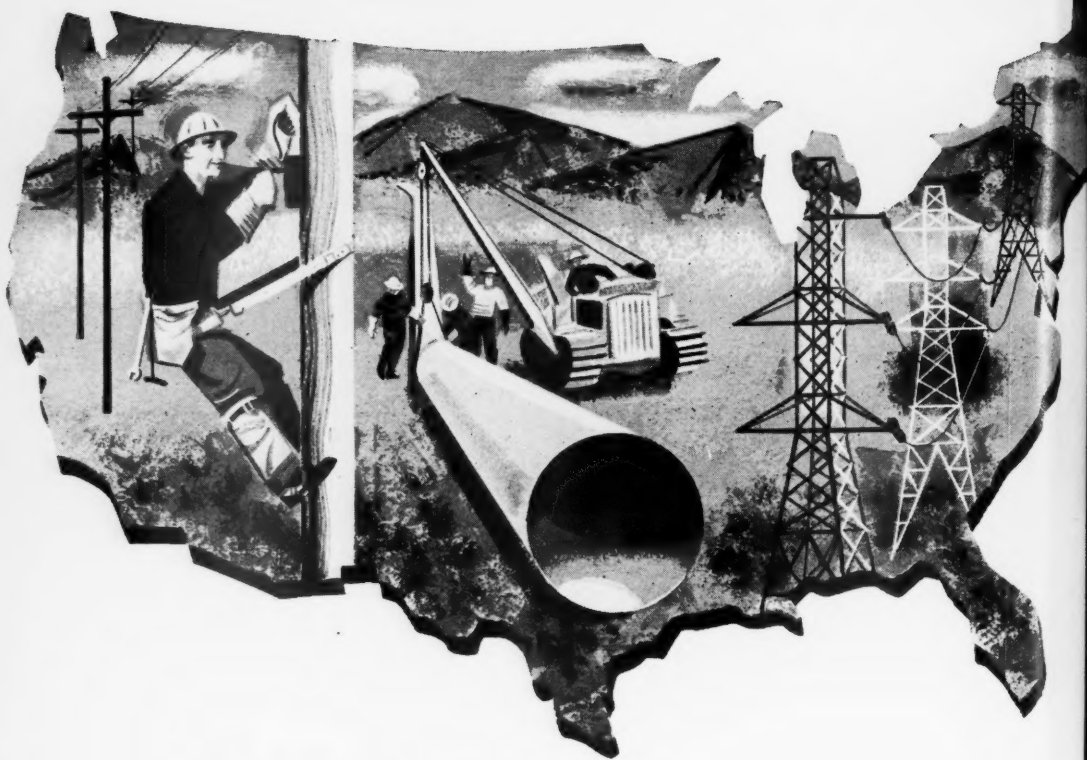


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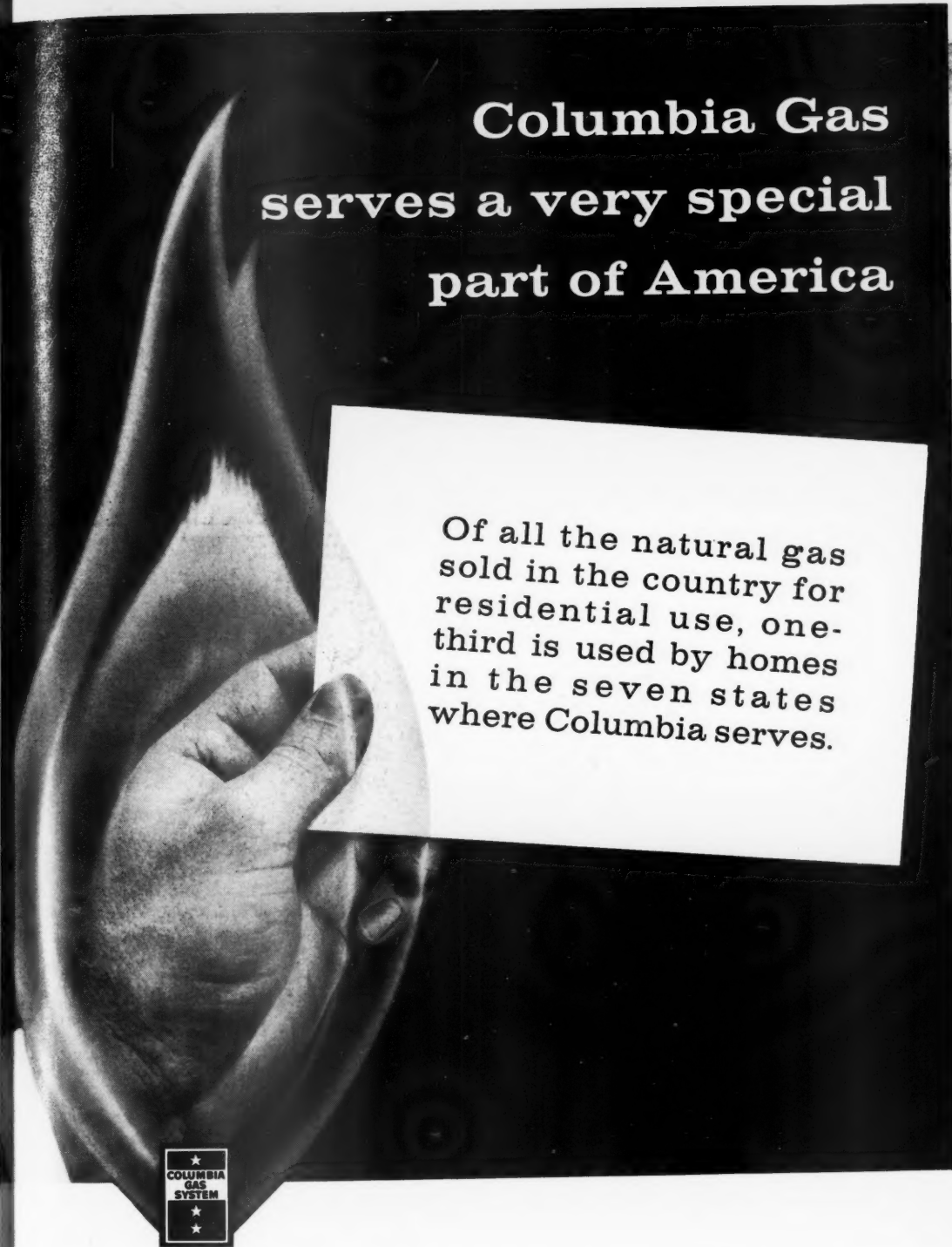
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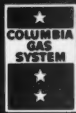
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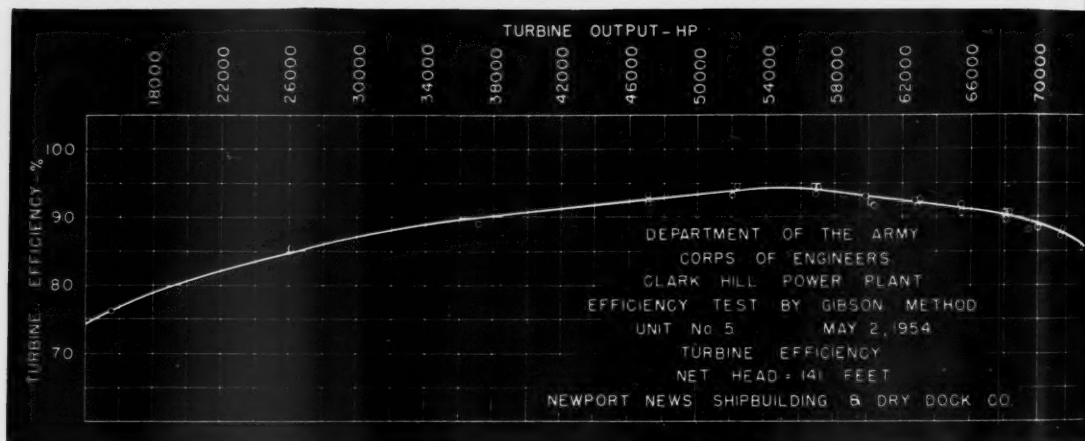
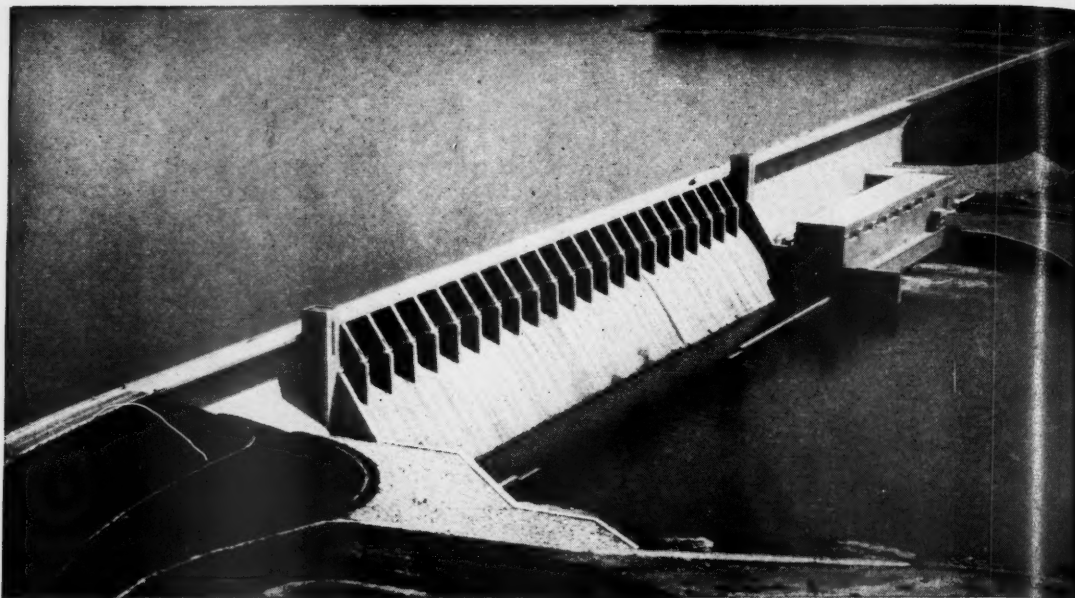


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And especially, experience in design and model testing.

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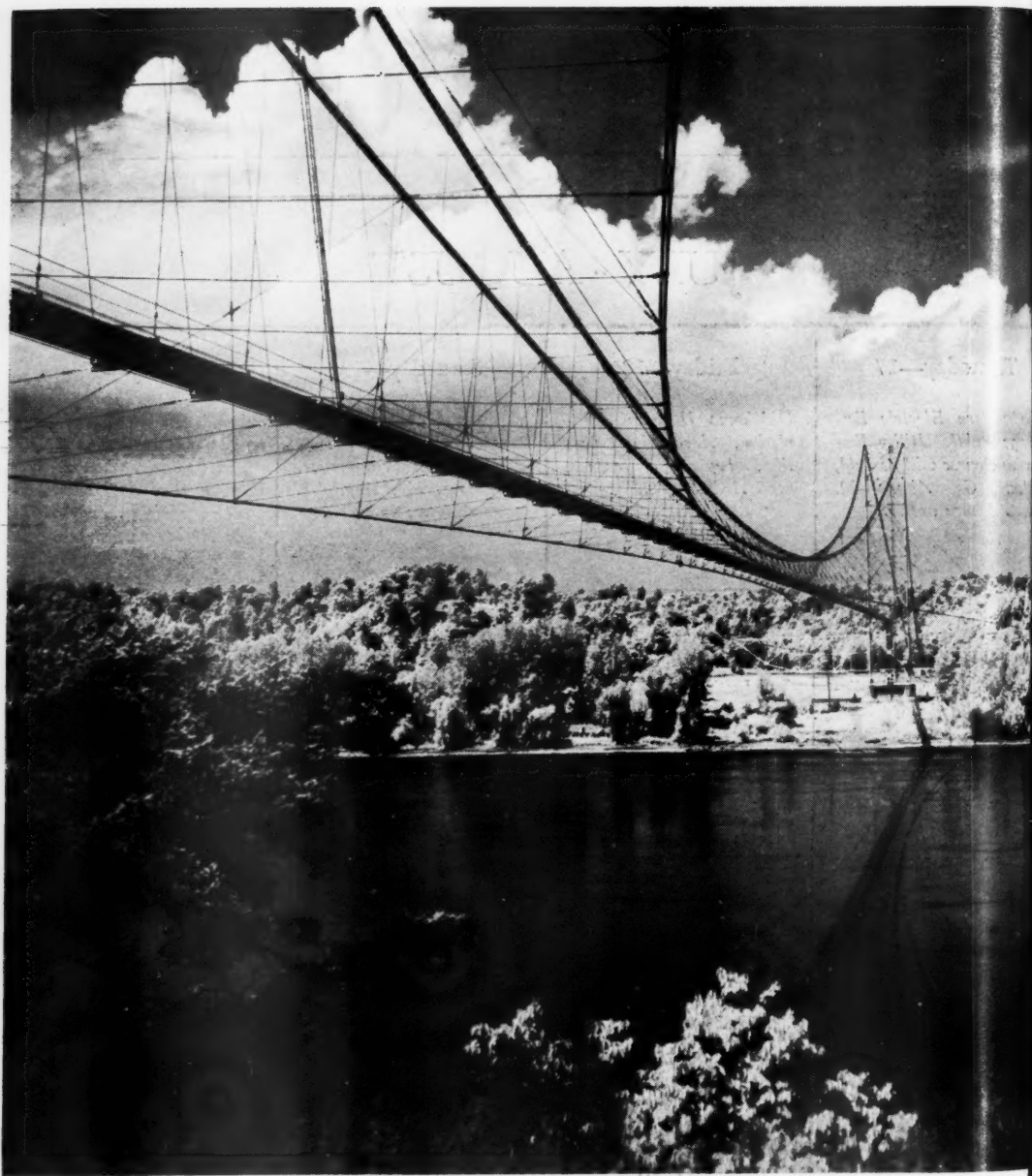
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UTILITIES

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JULY - AUGUST

Thursday—17 Southeastern Electric Exchange Public Utility Executive Course will be held, Atlanta, Ga. Aug. 4-29. <i>Advance notice.</i>	Friday—18 Oklahoma Utilities Association, Accounting Section, begins conference, Ardmore, Okla.	Saturday—19 Associated Police Communication Officers, Inc., will hold annual conference, Baltimore, Md. Aug. 4-7. <i>Advance notice.</i>	Sunday—20 American Institute of Electrical Engineers will hold special technical conference on nonlinear magnetics and magnetic amplifiers, Los Angeles, Cal. Aug. 6-8. <i>Advance notice.</i>
Monday—21 Western Summer Radio-television and Appliance Market begins western merchandise mart, San Francisco, Cal.	Tuesday—22 The Institute of Radio Engineers will hold conference on electronic standards and measurements, Boulder, Colo. Aug. 13-15. <i>Advance notice.</i>	Wednesday—23 Illuminating Engineering Society will hold national technical conference, Toronto, Ontario, Canada. Aug. 17-22. <i>Advance notice.</i>	Thursday—24 American Institute of Electrical Engineers will hold Pacific general meeting, Sacramento, Cal. Aug. 19-22. <i>Advance notice.</i>
Friday—25 Appalachian Gas Measurement Short Course will be held, Morgantown, W. Va. Aug. 25-27. <i>Advance notice.</i>	Saturday—26 American Bar Association will hold annual meeting, Los Angeles, Cal. Aug. 25-29. <i>Advance notice.</i>	Sunday—27 International Conference on Peaceful Uses of Atomic Energy will be held, Geneva, Switzerland, Sept. 1-13. <i>Advance notice.</i>	Monday—28 Pacific Coast Gas Association will hold annual meeting, Portland, Ore. Sept. 3-5. <i>Advance notice.</i>
Tuesday—29 World Power Conference, Canadian Section, will be held, Montreal, Quebec, Canada. Sept. 7-11. <i>Advance notice.</i>	Wednesday—30 Michigan Independent Telephone Association will hold annual convention, Grand Rapids, Mich. Sept. 9-11. <i>Advance notice.</i>	Thursday—31 American Water Works Association, New York Section, will hold annual meeting, Lake Placid, N. Y. Sept. 10-12. <i>Advance notice.</i>	AUGUST Friday—1 Independent Natural Gas Association of America will hold annual meeting, New Orleans, La. Sept. 14-16. <i>Advance notice.</i>



World's Longest Pipeline Suspension Bridge

Spanning the broad Mississippi 38 miles upstream from Cape Girardeau, Missouri, is this immense pipeline suspension bridge of the Texas Illinois Natural Gas Pipeline Company.

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Public Utilities

FORTNIGHTLY

VOL. 62, No. 2



JULY 17, 1958

Keeping Up with Utility Rate Regulation

A comprehensive discussion of problems involved in rate regulation and certain basic considerations which should be given weight by those charged with responsibility for preparing public utility rate cases.

By CHARLES A. ASHBY, JR.*

RATE increase proceedings today are big business both in number and size of the increases requested. The Federal Power Commission at the end of 1957 reported \$217 million in natural gas pipeline rate increases in effect, subject to refund. State regulatory authorities were reported to have granted \$250 million of increases for 1958 to major gas, electric, and telephone companies.

Some of these rate increase requests date back to 1954. Thus, it is becoming increasingly important to watch for any deterioration in earnings and, because of the long delay between the time of the request and the actual granting of relief, to request an increase as soon as practicable.

In discussing some of the recent rate case decisions, it would seem appropriate to relate them to some of the exhibits that must be considered in preparing data for a rate case. Very briefly, these exhibits are: rate base, expenses, and return.

*Manager, rate department, Stone & Webster Service Corporation, New York, New York. For additional personal note, see "Pages with the Editors."

PUBLIC UTILITIES FORTNIGHTLY

RATE base involves plant in service, acquisition adjustments, depreciation reserve, contributions, and working capital.

The major item of rate base is plant in service. Some of the factors that must be considered here are original cost, reproduction value, capitalization, and fair value. A majority of the regulatory commissions rely on original cost or book value, either average value or end of the period. Others, such as Ohio, use reproduction value. Still others may use capitalization or some combination of these to represent fair value rate base. Therefore, management's decision on the value to use will depend upon the particular regulatory authority or commission under which the company operates.

There are 16 states that may be considered as using a fair value rate base. The number decreased from 17 in 1957 when the legislature of the state of Maine removed the requirement that the state commission must consider current cost. Missouri is the most recent state to be required by law to recognize fair value.

ESTABLISHING reproduction value of plant in service is necessary in order to arrive at a fair value above book cost. This reproduction value may be determined in a number of ways. Generally, the method least costly to the company is to use a trended cost rather than actual determination by physical inventory of the property. Trended methods have been accepted in rate case decisions by state commissions in Pennsylvania, Ohio, and Illinois.

Perhaps the most recent court case involving reproduction value is the New York Bell Telephone Company case in

which the highest state court held that the New York Public Service Commission must recognize reasonable average return upon the value of the property. The telephone company, in its presentation before the commission, put in reproduction value, relying primarily upon trended costs. The New York commission condemned reconstruction cost new and said it was better to use book values and increase the rate of return. The Rhode Island commission recently denied the Narragansett Electric Company any increase. The company had presented reproduction cost data. Minnesota granted Northwestern Bell Telephone a 6 per cent return on fair value where original cost and current value were given equal weight.

THE utility generally will introduce exhibits showing its capitalization. Some states have attempted to rely upon capitalization as rate base and disregard entirely original cost or reproduction cost rate bases. The Louisiana state commission in its most recent decision in the Southern Bell Telephone & Telegraph Company case used capitalization only and a rate of return upon this capitalization derived from cost of money. This was upheld by the Louisiana supreme court on February 25, 1957. Here the commission assumed a capital structure of 45 per cent debt and 55 per cent equity. The courts indicated this to be 5.31 per cent return on net book. The cost-of-capital approach in arriving at rate of return indicates that the so-called capitalization rate base is very important if the commission considers it synonymous with rate base.

Michigan may be considered a fair

KEEPING UP WITH UTILITY RATE REGULATION

value state because it considers the various rate bases in arriving at the rate of return to be allowed. Last summer, in a decision in the Michigan Bell Telephone Company case, the company requested a \$12.5 million increase and the commission allowed \$2,835,000. Perhaps the most significant note in this decision was that the commission said "... that with one exception since the Hope case decision it has adhered to a factual rate base grounded on the actual investment in property used and useful in providing service to the public." Book cost of the property was used here. The commission allowed 6.6 per cent and the staff used 33 $\frac{1}{3}$ per cent long-term debt at 3.15 per cent and 66 $\frac{2}{3}$ per cent equity at 8.3 per cent to arrive at 6.6 per cent overall per cent return.

MANY utilities put in a fair value rate base if the commission must consider it in any way because they feel that, in a period of rapid inflation, the commission may not grant what they would consider to be a reasonable decision and the only relief would be to take the case to court.

Acquisition adjustments are prices paid in excess of original cost. Generally, these are considered good rate base and are written off over a period of years. In the recent Florida Power & Light case it appears that some of the \$7.6 million of acquisition adjustment was allowed in the rate base.

DEPRECIATION reserve is next. It is deducted from plant in service in arriving at a rate base. The old idea in Missouri and Louisiana of using gross plant, or plant in service plus construction work in progress, and crediting a per cent on the reserve to utility income has been discarded in both states. The amount of the reserve is generally a matter of considerable controversy in rate cases. It must be related to the plant investment that management elects to present for rate base. Where current cost new or reproduction value is used, it is generally necessary that a qualified engineer observe the condition of the property to arrive at observed depreciation. New York claimed there was no acceptable method in arriving at depreciation reserve for reproduction cost new.



"RATE increase proceedings today are big business both in number and size of the increases requested. The Federal Power Commission at the end of 1957 reported \$217 million in natural gas pipeline rate increases in effect, subject to refund. State regulatory authorities were reported to have granted \$250 million of increases for 1958 to major gas, electric, and telephone companies. Some of these rate increase requests date back to 1954. Thus, it is becoming increasingly important to watch for any deterioration in earnings and, because of the long delay between the time of the request and the actual granting of relief, to request an increase as soon as practicable."

PUBLIC UTILITIES FORTNIGHTLY

THE question of normalizing depreciation accrual and reserve for rate purposes is of great importance where a company uses "liberalized depreciation," such as the declining balance or sum-of-the-digits method for depreciation accrual for tax purposes. Few commissions have ruled how it is to be treated for rate cases. The FPC, in the Amere Gas Company case, permitted normalization similar to the method used in five-year rapid amortization cases. The Indiana commission, in the Public Service Company of Indiana case on January 11, 1957, allowed it. Apparently, the Florida commission has allowed it in the Florida Power & Light case. Kentucky and Wisconsin commissions appear to split the benefits between the utility and the customers. On the other hand, it has been refused recognition by the New Jersey, Pennsylvania, New Hampshire, California, and Missouri commissions for rate purposes.

The next consists of contributions and advances for construction that are not refundable to customers. And, while there have been no recent decisions affecting these, courts generally uphold commission decisions which deduct them from the rate base.

The subject of working capital has produced considerable controversy. Many of the states are following the lead of the FPC in allowing working capital to include material and supplies, prepayments, and cash (which generally is forty-five days' operation and maintenance, excluding purchased power and purchased gas) and then crediting back the average balance of the federal income tax accruals for the test period. In the case of the FPC this has ranged from 65 to 75 per cent of the income tax accrual. The

Missouri commission in the case of the Gas Service Company on June 4, 1956, and the St. Louis Water Company in 1957, credited back income tax accruals but not the full amount, because it will not let the credit be sufficiently great to reduce the amount set up for material and supplies. The most recent rate case decision is for the Panhandle Eastern Pipe Line Company's subsidiary, Trunkline Gas Company, in which the fifth United States circuit court of appeals on July 23, 1957, ruled that to use the average balance is unreasonable and the amount to be credited should be the lowest amount and not the average. This will reduce the credit which FPC has been using to about 33 per cent instead of 66 per cent. A trial examiner in El Paso Natural Gas Company, Docket No. G-4769, also used 33½ per cent. This was in March of 1958.

IN the expense category, other than depreciation as mentioned before, the principal controversy revolves around the fair field price for gas. In the Panhandle Eastern Pipe Line Company case the United States court of appeals for the District of Columbia on December 15, 1955, remanded to the FPC a requirement that it show the basis on which it allows fair field price.

Following this came the Colorado Interstate FPC decision on May 8, 1957. Here the trial examiner for the commission allowed the pipeline company its cost of production and not fair field price. The company claims that the decision, which included the rejected fair field price, a 6 per cent return, and FPC jurisdiction over certain direct sales, will bankrupt it. The decision is being contested.



Treatment of Stepped-up Depreciation

"THE question of normalizing depreciation accrual and reserve for rate purposes is of great importance where a company uses 'liberalized depreciation,' such as the declining balance or sum-of-the-digits method for depreciation accrual for tax purposes. Few commissions have ruled how it is to be treated for rate cases. The FPC, in the *Amerc Gas Company* case, permitted normalization similar to the method used in five-year rapid amortization cases. The Indiana commission, in the *Public Service Company of Indiana* case on January 11, 1957, allowed it. Apparently, the Florida commission has allowed it in the *Florida Power & Light* case. Kentucky and Wisconsin commissions appear to split the benefits between the utility and the customers."

THE third exhibit concerns rate of return. Since the Hope Natural Gas decision in 1944, there has been a tendency to move "rate of return determination" to the forefront over "rate base determination." Rate of return determination may be considered as necessary for:

- (a) Maintaining credit.
- (b) Meeting comparable risks.
- (c) Attracting capital.

Many rate of return witnesses use the earnings-price ratios and dividend-price

ratios in proving the attraction of new capital, and the recent market action shows that common stock buyers do not buy on the basis of past earnings and dividends paid. The return necessary to attract new capital may be greater or less than a fair return to existing investors to maintain credit. Some witnesses assume that the rate of return to attract capital is synonymous with fair rate of return. This is dangerous. Such a return does not allow for future deterioration of earnings nor an allowance for attrition or regulatory lag.

PUBLIC UTILITIES FORTNIGHTLY

The highest rate of return so far allowed by FPC is $6\frac{1}{4}$ per cent for Columbia Gas System subsidiaries, such as for Amere Gas Company in February, 1957.

THE state commissions vary. The Florida commission claims it is required to fix rate base and appears to use the year-end net book rate base. In the Peninsular Telephone case in December, 1956, it allowed 7.08 per cent return. It allowed a 6.98 per cent return for the Florida Power & Light Company on an end-of-the-period rate base. The commission chairman stated they were more concerned with the dollars a company needs than rate of return.

The state of California in the Southern Counties Gas Company case in September, 1957, stated that normally it would allow 6.5 per cent, but because of the declining tendency in rate of return, or attrition, it allowed 7.13 per cent. In 1954, it allowed this company 6 per cent. Also, in the Southern California Edison case it allowed 6.37 per cent because it expected earnings to deteriorate to 6.25 per cent in the near future.

In Idaho, a decision in October of 1957 recognized attrition by granting a higher rate of return for a telephone company.

The Indiana commission in the Hoosier Gas case, July 19, 1957, allowed 6 per cent on fair value. That appears to be 6.78 per cent on net book, including working capital-material and supplies and cash.

The Iowa supreme court in the Iowa-Illinois Gas & Electric case, decided in September, 1957, ruled that replacement costs must be considered and used 70 per cent replacement cost and 30 per cent original cost and a 6 per cent return.

Nebraska, in a decision in May, 1957,

allowed 0.3 per cent for attrition in allowing 6.5 per cent on net book for a telephone company.

In the New York Telephone Company case, the commission said it recognized higher interest rates and 0.3 per cent for future deterioration of earnings or attrition in allowing the company 6.5 per cent return that appears to be 6.8 per cent initially.

THE foregoing examples are indicative of the trend in recent rate cases. All commissions know that inflation means higher rates. They are not going to tell you to apply for rate increases as soon as your earnings start to slide, but they will wonder why you do not.

The United States circuit court of appeals' decision of November 21, 1957, in the Memphis-United Gas Pipe Line Company case is most important. It appears to say that a pipeline needing a rate increase must come to FPC with agreements to the increase signed by all customers before the increase can become effective. The FPC has appealed to the Supreme Court and the case is anxiously being watched by both pipeline and distribution companies.

There are a number of interesting features in the new rate schedules for both gas and electric utilities. For gas pipeline companies they are end use and zone rates. For distribution companies it is air conditioning and, with natural gas sales dominating the market, it appears appropriate to review briefly the rates of the major suppliers of natural gas.

The rate forms currently used by major pipeline companies are relatively small in number. The demand-commodity form, such as \$3 per Mcf of peak-day demand

KEEPING UP WITH UTILITY RATE REGULATION

and 25 cents per Mcf commodity, is the most popular and is used by 30 out of 41 companies.

WITH respect to end use, the Federal Power Commission staff in its approach to the cost of service tries to split costs 50 per cent to peak day and 50 per cent to annual commodity use, with the exception of production or purchased gas costs which it tries to classify as commodity cost. It would appear that FPC has for years been striving to control the end use of the gas by loading up the commodity charges so that gas could not be sold for boiler fuel. With the rapidly increasing costs for gas in the field, the FPC will either have to revise its traditional approach or else many of the utilities will be priced out of the market for the sale of this so-called boiler gas. The result could only mean higher rates for the remaining customers.

The other portion of pipeline rates that is creating controversy is zone rates. These leave the customers of the pipeline company in disagreement among themselves. It is not subject to definite mathematical determination. In the El Paso Natural Gas Company case, the FPC gave a certain amount of weight to historical costs. In the Tennessee Gas Transmission Company case, the company is proposing that in pricing the rates for zone purposes, it should give some consideration to historical costs. Obviously, any zone method is a matter of individual judgment and subject to considerable controversy. The customer farthest from the gas source, where mileage cost is recognized, will pay the most even though he may have been the one that made the project initially feasible.

AMONG gas distribution companies, air conditioning and the rates necessary to promote it are probably the most discussed subject. The gas air conditioner, of course, is ideal for picking up the summer load for those gas distribution companies having high winter loads for space heating. Much experimental work is being done and there is considerable enthusiasm in the gas industry for this potential new load.

In some cases where it is felt that the rate schedules are not sufficiently low to promote air-conditioning service, the companies are considering incentive rates. For residential use this might be a discount to be applied on all residential use over a small volume to cover cooking and water heating during June, July, August, and September. For commercial use, the pricing of this gas may require a separately metered, special rate in order to get the price low enough and still not lose too much revenue from other commercial uses.

Principal interest in electric rates seems to center around water heating, escalation clauses, and space heating.

Many electric companies have attempted to increase water heater sales by promoting the quick recovery features introduced a few years ago. Various association committees have been working on standardization of sizes and wattages. The high wattage fast recovery heater of 40- to 52-gallon capacity is not large enough for storage purposes for off-peak service if the time off is very great, and low off-peak rates are designed for slow recovery. So, as wattages increase, the rates will trend upward, either in price or by putting the top element on the regular residential use meter.

PUBLIC UTILITIES FORTNIGHTLY

LAST year *Electrical World* reported on the test by Kansas Power & Light Company of a heat pump for water heaters. The design is intended to develop a heater which would provide hot water, with but 40 to 50 per cent of the energy required by conventional means. The report covers details of the test results and efficiencywise it looks good. Present major obstacle to mass production of heat-pump water heaters is the higher initial cost.

The necessity for provisions in rate schedules for residential gas and electric service to cover automatic escalation for cost of purchased gas and for fuel is becoming more and more apparent to many jurisdictions. Stone & Webster Service Corporation's rate department made a survey of these in July of 1957. At the time of the survey, 106 gas companies in 32 states and 60 electric companies in 27 states were permitted to escalate residential rates for increases in purchased gas or fuel costs.

The California Public Utilities Commission refused such an escalation for Pacific Gas and Electric Company gas rates. Kentucky recently authorized all gas-distributing companies to escalate for changes in wholesale gas prices.

IN the electric utility industry, the interest in electric space heating is mushrooming at a rapid rate.

It has been estimated that 300,000 homes are electrically heated and that of these, 25,000 are heat-pump jobs. At 10,000 kilowatt-hours per home per season for space heating and 1.5 cents per kilowatt-hour, this represents \$45 million in revenue. Apparently most of the com-

panies which are promoting or plan to promote electric space heating are straight electric companies. However, there are nearly as many utilities above the 4,000-degree-day line which do or will promote it as there are in the South.

Most of the companies promoting electric heating compete with natural gas at between 50 cents and 70 cents per Mcf and with fuel oil at between 14 cents and 16 cents per gallon. Electric rate pricing ranges from 1½ cents or below to as high as 2 cents per kilowatt-hour.

In considering the rates which should be set, Kansas Gas & Electric concluded that such rates should be simple and easy for the customer to understand, they should be compensatory and the rates should approach competitive costs although they need not be as cheap as others. The company believes 1½ cents will do this.

The demand meter type of residential rate does not appear to be gaining in favor. In Illinois, the commission refused to permit residential demand meters but does allow an addition to the rates, such as those for Central Illinois Electric & Gas Company.

THESE are only a few of the current developments with respect to regulation and rate making. The overall trend seems to emphasize the importance of watching forecasts for deteriorating earnings. Any company going for a rate increase, should put its best foot forward and not be afraid to ask for what its management thinks is fair. The rate schedules it asks for should reflect a careful analysis that will encourage future use and assure good earnings.

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Utility-Municipal Partnership in Water Supply

Public utility companies everywhere, especially electric light and power companies, have a very close community of interest with the municipal governments in their service areas with respect to the availability of adequate and suitable water supplies.

By HOWARD R. DREW*

THE responsibility of an electric utility company in helping to solve municipal problems of cities and towns in its system and the benefits that can accrue therefrom should be carefully considered today. The growing dominance of federal government, increased taxation and spending, and rapidly increasing population have multiplied the problems of cities and towns and have brought about conditions under which the corporate citizenship responsibilities of electric utilities have increased greatly.

One such responsibility is that of pro-

*Senior engineer, Texas Electric Service Company, Fort Worth, Texas. For additional personal note, see "Pages with the Editors."

viding an adequate municipal water supply; and Texas Electric Service Company, much of whose service area is faced with some difficult water supply problems, quite naturally realized some time back that it should consider its needs for water for steam-electric generating stations in the light of some type of co-operative action that might be taken to assist cities and towns in the area in meeting the need for more adequate water supplies for present requirements and for future growth.

IN system planning, the company needs to be reasonably assured of a known



PUBLIC UTILITIES FORTNIGHTLY

amount of water each year, a condition which is not always easy to fulfill in rapidly developing regions where surface supplies are a vital and major source of water and where average annual rainfall varies widely from year to year. Similar considerations influence a city's planning of its municipal water supply. The city faces the problem of financing timely additions to meet the needs of its customers and to provide the surplus supplies necessary to assure healthy municipal growth and the attraction of new industries.

In much of Texas, conditions are such that surface water reservoirs, in order to provide carry-over storage sufficient to assure an adequate water supply during dry periods, must be relatively large and take full advantage of their watersheds. Also, since suitable streams or dam sites are not always conveniently nearby, a city may find it necessary to finance miles of pipeline and pumping facilities. Since taxing powers of municipalities are limited under the Texas Constitution, waterworks systems and water supply reservoirs are financed largely from bonds supported by water department revenues. Revenue bond buyers, however, require a showing of revenues in excess of operating expenses and debt service requirements, the excess being a margin of safety for the buyer, but at times a real problem for a city or water supply district.

WITH the utility and the city having a common and pressing need for water, it might be natural for competition to develop between them, but actually the reverse can be true. Texas Electric Service Company has taken the initiative in pointing out the mutual benefits to be had by the joint development of water sup-

plies where site location and other conditions justified company participation, and the cities have usually been quick to recognize the advantages of such co-operation.

Cities with limited ability to finance water supply projects have been able in a number of cases to co-operate with the company and provide a larger reservoir than would otherwise be constructed at the site. The larger reservoir, which provides the community with a long-range water supply, almost always will cost less per acre-foot of water stored, and usually will be more efficient hydrologically. This also means that the watershed can be put to a maximum use and, in addition, the co-operative plan and larger reservoir will provide additional recreational area. The company, of course, also benefits from a more dependable water supply for use in the operation of steam power plants, and at the same time it assists in promoting the growth and progress of the area served so that the company's progress can also continue.

THE program of co-operation was adopted about twelve years ago, with the form of participation depending somewhat on the conditions involved. The initial development resulted from the need for additional generating facilities in the Permian basin area of west Texas, where new and intensive oil field development had begun and where municipalities were relying on diminishing underground water as a source of supply. One phase of the company's study of this problem included a careful analysis of the future growth prospects of the cities and towns of the area. This analysis highlighted the fact that their water supplies were limited and inadequate for

UTILITY-MUNICIPAL PARTNERSHIP IN WATER SUPPLY

growth and, further, that the remedial measures were perhaps beyond the financial abilities of any one of the cities acting independently.

Faced with these conditions, the company's staff and consultants combed the entire area for possible sources of a joint water supply and did enough of the preliminary engineering to assure that a project of this sort was feasible, economically sound, and practical. They were able to suggest a sound solution involving a major reservoir development from which each of the participating cities could be supplied with water. The problem then became one of interesting substantial citizens in the various towns of the group, encouraging them to form a group organization, perfecting the engineering studies, finding the best means of financing the project, and building up in the area sentiment for a combined water project among these basically competitive cities.

SINCE a somewhat novel corporate arrangement was indicated, it became necessary to secure the passage of enabling legislation in the state legislature and to resolve several legal problems in connection

with the organization of a municipal water district comprising the participating cities. In all of these matters the Texas Electric Service Company executives and staff were able to make constructive suggestions and to offer some guidance without, at the same time, infringing on the independence and responsibilities of the directors of the water district and the officials of the participating cities.

In 1951 the water district sold \$11,750,000 in revenue bonds to finance the project. The bonds are supported solely by revenues from the sale of water, and bear interest at rates varying from 2 per cent to $2\frac{1}{2}$ per cent. This favorable rate was possible largely because of the district's ability to demonstrate financial soundness. As finally engineered, financed, and carried out, this project included the construction of a 204,000 acre-foot reservoir with a surface area of 8,000 acres intercepting approximately 960 square miles of drainage area, the building of a 91-mile pipeline from the lake west to the cities of Big Spring and Odessa and a 17-mile pipeline east to the city of Snyder, together with associated pumping stations, and further development of a



Q "THE responsibility of an electric utility company in helping to solve municipal problems of cities and towns in its system and the benefits that can accrue therefrom should be carefully considered today. The growing dominance of federal government, increased taxation and spending, and rapidly increasing population have multiplied the problems of cities and towns and have brought about conditions under which the corporate citizenship responsibilities of electric utilities have increased greatly. One such responsibility is that of providing an adequate municipal water supply..."

PUBLIC UTILITIES FORTNIGHTLY

water well field nearby to provide part of the interim requirements at Big Spring and Odessa.

DURING the preliminary studies of this project in the Permian basin, a favorable site for a smaller reservoir was located on Morgan Creek, a tributary of the Colorado river near Colorado City, Texas. Growth of the area indicated an immediate need for additional generating capacity and studies showed that the location near Colorado City would be efficient from the standpoint of generation for the company system.

The Colorado City municipal water supply had been obtained from ground water sources, but it was becoming apparent that this supply was limited and additional water would be required. Consequently, the company undertook to develop co-operatively with Colorado City a reservoir at the site, and in 1948 a permit for the construction of a 30,000 acre-foot reservoir on Morgan Creek was obtained. The company entered into a contract with the city under which the city purchases water from the reservoir, has its own intake and pumps on the reservoir, and assumes the responsibility of policing the reservoir and its watershed to prevent pollution.

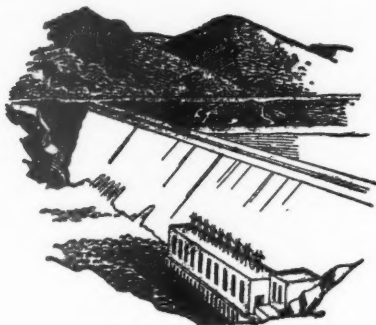
In the years following 1948 the area has grown more rapidly than anticipated; four generating units have been put into operation at the company's Morgan Creek plant, and a fifth is under construction. Another unit is being planned after 1962. The company is therefore constructing another reservoir on nearby Champion Creek to augment the water supply for its expanding plant and for the city's increasing requirements.

JULY 17, 1958

MEANWHILE, at the east end of the company system—in the area between Fort Worth and Dallas—the city of Arlington was experiencing a population growth at a rate which has been exceeded by very few cities in the United States (from 15,000 in 1954 to 38,770 in 1957). In 1953 Arlington city officials recognized a coming pinch in their water supplies, which at that time came from a system of water wells pumping from the Trinity sands. These sands, while prolific, supply water to other cities and industries in the area and pumpage has exceeded the rate of recharge with the result that water levels have declined continuously for many years.

After consideration of several alternatives, Arlington's engineers advised that the best course would be the construction of a reservoir on nearby Village Creek. There were alternative proposals: a reservoir with 40,000 acre-feet of capacity, or a smaller and less costly lake with 25,000 acre-feet. The city's finances would not permit the construction of the larger reservoir, and bonds were issued to finance the smaller lake at an estimated cost of \$2.3 million.

SINCE the company's Handley steam-electric generating station is located near the site of the proposed lake, and since the plant had been operating on well water from the Trinity sands, the company recognized the mutual benefits involved in having the larger reservoir built. Such a source of cooling water also would eliminate the need for cooling towers, thereby reducing the company's water consumption per kilowatt-hour generated and eliminating a source of high maintenance costs.



Water Problems in Texas

"In much of Texas, conditions are such that surface water reservoirs, in order to provide carry-over storage sufficient to assure an adequate water supply during dry periods, must be relatively large and take full advantage of their watersheds. Also, since suitable streams or dam sites are not always conveniently nearby, a city may find it necessary to finance miles of pipeline and pumping facilities. Since taxing powers of municipalities are limited under the Texas Constitution, waterworks systems and water supply reservoirs are financed largely from bonds supported by water department revenues."

An agreement was made whereby the company would, in effect, finance the additional cost of construction of the larger reservoir in return for which it would be given the right to a proportionate part of the storage and water yield. The city was to construct, own, and operate the reservoir and police and maintain it. This reservoir was completed early enough in 1957 to be filled shortly after completion by heavy spring rains. This occurred none too soon, for Arlington's underground water supply had become inadequate and the city had found itself forced to depend upon emergency water from Fort Worth and from the company's Handley plant wells.

ANOTHER city in the company system that was outgrowing its municipal water supply in this period was Graham in north Texas. Graham had been plentifully supplied with water from its Lake Eddleman on Flint Creek since it was built in the twenties, but the city's growth and the recent drought period in the Southwest made a new long-range supply necessary.

Although a suitable site for a larger lake was available on another creek adjacent to the existing lake, it was impossible for Graham to finance the full development of the watershed.

System load studies had shown, meanwhile, that the Graham area, a strategic

PUBLIC UTILITIES FORTNIGHTLY

junction on the company system between Fort Worth and west Texas, would be a desirable location for a new power plant site, provided sufficient water supplies were available. Again it was apparent that benefits could be obtained by co-operative action between the city and company, and such a proposal was made to the city. The city concurred and in 1955 the state awarded a permit for the project.

THE agreement worked out between the city and the company provides for option payments by the company to preserve its rights to use water from the reservoir in the future, with option payments to end when the company begins to use water from the lake for operation of a power plant at the site. The company's option payments are recoverable in part out of its payments for water over an extended period. Availability of this option money simplified the city's financing of the project and at the same time gave the company assurance of a future water supply.

Subsequent to the initial arrangements, it appeared desirable to make provisions for interconnecting the city's existing Lake Eddleman on Flint Creek with the new reservoir. This involved raising water levels in Lake Eddleman 13 feet and an agreement was reached between the city and the company whereby the city will cause the Lake Eddleman dam to be raised and the two lakes to be interconnected by a canal. The company contracted to pay the additional expense of this project and is entitled to the additional water made available. Joining the two lakes and raising the Eddleman dam also will provide substantial incidental flood-control benefits for Graham, which

is situated downstream from the confluence of the two streams.

WHILE these various projects make available adequate water supply for the immediate future, the impressive growth in the company's load in recent years and the increasing water consumption throughout the area make it apparent that the search for long-range water supplies cannot be relaxed. Such resources must be acquired in advance of need if water shortages are to be avoided.

Looking even beyond the full development of streams affording water of good quality, the company has studies under way on possible uses of large deposits of moderately salty underground waters and of several surface streams whose waters are contaminated by salt deposits in their watersheds.

Texas Electric Service Company feels such waters present a potentially valuable undeveloped resource, susceptible to use in two ways: (1) by industries whose processes are such that moderately salty water can be tolerated, particularly by those industries which require water for cooling purposes, and (2) by demineralization, to remove enough salts to make the water drinkable or suitable for various industrial processes.

In order to determine what underground brackish water resources are available, the company has undertaken an extensive survey of the saline water resources in a large area in its western division. The results of this survey will indicate the extent of the deposits and their nature and will make it possible to provide prospective users with reasonable assurances as to saline water availability.

UTILITY-MUNICIPAL PARTNERSHIP IN WATER SUPPLY

IN recent years considerable progress has been made in the development of processes for removing salts from water and there are several under active investigation at this time, most of them being variations of the distillation process. However, one process, electrodialysis, operates upon an entirely different principle. Although the fundamentals upon which this process depends have been known for many years, the recent availability of synthetic ion exchange membranes of high electrical conductivity has only lately made the process appear economically feasible.

Although none of the demineralization processes now available produce cheap water, the electrodialysis process shows considerable promise for the desalination of brackish waters because it is the one process in which the power requirements are roughly proportional to the amount of salts removed; and it appears that moderately salty waters, such as are available in many southwestern areas, may some day be treated at costs which are competitive with the ever-increasing cost of obtaining fresh water from surface supplies.

SINCE it was felt that the electrodialysis process showed promise and might in time provide a supplemental water supply for some of the communities served, the company began in 1954 a program of investigation and testing. At first this program was limited to the operation, under field conditions, of electrodialysis equipment of the only design commercially available at that time; but

it soon appeared that further work should be undertaken to press for the large-scale units which will be needed. To this end the company has been conducting independent research, which has stimulated interest in the process. Prospects are good that research will result ultimately in the development of larger and much more economical plants than are presently available.

The company is also interested in research to help solve the problem of evaporation from reservoirs. Cities in west Texas that depend on surface water supplies find that evaporation consumes as much, or more, water as is put to useful purposes. It has been estimated that the 17 western states alone lose as much as 15 million acre-feet of water by evaporation. Recognizing the importance of these losses, the company in 1955 encouraged the formation of a nonprofit organization devoted to financing research designed to find ways and means of reducing evaporation losses. Monomolecular films, which demonstrate savings of up to 65 per cent or better in the laboratory, show great promise and the company is actively participating in this research.

IN summary, both the company and the various communities in its system have benefited by those projects which have already been completed; and, by continuing such a mutually beneficial program as well as a constantly alert program of research, the company and the cities and towns in its system will be able to do much to meet the ever-increasing need for additional water supplies.



What Can Be Done about the Right-of-way Problem?

System planning engineers, as well as other utility management people, will profit by this brief outline of general principles. It covers future price estimation of known sites as well as speculation as to the availability of suitable property in the future.

By M. C. WESTRATE*

ONE article or a hundred will not solve the many varied problems presented in the acquisition of land for utility use, but it is hoped that this article will in a general way present the major aspects of the problem so that those interested can see what has to be done. This alone would be a start toward a solution, because understanding a problem is the first important step or, as the saying goes, "A thing well begun is half done." It is also hoped that some of the suggestions made will stimulate ideas and

develop ways in which to alleviate some of the right-of-way problems.

The system planning engineer faces the issue squarely when, in studying alternate plans, he tries to estimate the future price of right-of-way sites and also tries to determine the possibility of suitable property being available at any price. The right-of-way department tries to be helpful but usually is discouraging because of some recent purchases it had to make at a very high price or because of some zoning restriction it could not get changed, with the result that it had to plan a different route.

After hearing all the woes of the right-

*Staff consulting engineer, Commonwealth Associates, Inc. Jackson, Michigan. For additional personal note, see "Pages with the Editors."

WHAT CAN BE DONE ABOUT THE RIGHT-OF-WAY PROBLEM?

of-way department, the planning engineer decides that the price of property is already too high and rapidly going higher, with the possibility of becoming unavailable.

As a result, he concludes that he should project his planning further into the future and recommend the purchase of all the sites and right of way that will be needed as far as plans can be projected practically and at least until time for him to retire, which may be twenty years away.

PLANNING on such a scale is a big project but, assuming that it can be done, the planning engineer proudly takes his long-range plans to management and finds a great deal of interest but, as he expected, he also finds many other problems. The raising of sufficient money to buy the amount of property involved may put too heavy a strain on the capital structure of the company and even the amount that can be financed is a questionable investment if the company is not allowed to put the land held for future use in the rate base so as to be able to earn on it until used.

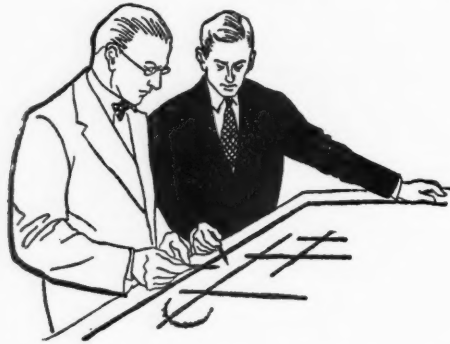
Other problems are also presented by the early acquisition of property. In many areas it is almost impossible to acquire any extensive right of way without some condemnation. In some states the courts will not allow condemnation for future use and it is questionable whether it is wise to invest in part of the right of way if the total is not assured. If certain desirable sites and rights of way are available, what is the assurance that future zoning restrictions might not prevent their use as intended? In addition to these unanswered problems there are the

taxes and insurance on the property, the maintenance and the protection against encroachment, and other risks.

FACED with all the problems of early acquisition of land, management may not agree with the planning engineer on this as being the solution to future right-of-way problems, even though property values have increased enormously in the past and will probably continue to do so in the future. This is particularly true if the public utilities commission will not allow including this investment in the rate base. If not included, the carrying charges are taken from the earning of the stockholders. This might be considered reasonable if there were a good probability of recouping this loss through future increased earnings, but this would appear to be only wishful thinking in a regulated utility. On the other hand, placing land held for future use in the rate base may be construed as making present customers pay for the benefit of future customers. Between the two, it would seem that present customers stand a better chance of profiting by such prudent investments through lower rates as future customers than do the stockholders.

Faced with the many discouragements for obtaining adequate sites and right of way for future needs, the planning engineer would be tempted to turn to alternate means of supplying electric service if there were any practical means available. Underground construction is the method most often suggested and this has been necessary to a limited extent in the larger cities in spite of the fact that the cost is several times that of open wire lines.

The extensive use of underground



Community of Interest in Right of Way

"INTEREST in the right-of-way problem is rapidly increasing as the problems of acquisition get greater and greater. The problem is more and more becoming one for management since it involves large expenditures of money and some very important policies for the future. No doubt a great deal can and will be accomplished through the co-ordinated efforts of the various utilities and others involved in land use. This goes for many right-of-way problems, such as relocation for highways. Co-operation between utilities could also be beneficial in the right-of-way problem associated with relocation of facilities to accommodate a highway construction program. All efforts must necessarily be directed toward the common good and public welfare."

construction would not only materially increase the cost of electric service but would pose some engineering and operating problems. Only a few miles of high-voltage cable can be used before the charging current equals the thermal capacity of the conductor. Series reactors could be used in somewhat the same way as loading coils are used in long telephone cables, except they would need to be very large in order to carry the hundreds of amperes of power current and they would add appreciable losses to the circuit. Also they would add considerably to the cost of the already expensive cable circuit.

ANOTHER way to overcome the large capacitance of cables is to use direct current. This, however, requires large investments in terminal equipment which makes it impractical except for special applications, such as the one in Sweden from the mainland to the island of Gotland, a distance of 60 miles.

One thing that becomes evident to the planning engineer is the desirability of planning for maximum use of existing right of way. This may involve the use of extra-high voltage or simply larger conductors and multiple circuit towers. It could also mean in some cases the use of

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WHAT CAN BE DONE ABOUT THE RIGHT-OF-WAY PROBLEM?

single pole structures as was done in the hybrid seed corn country near DeKalb, Illinois, to minimize the number of rows of corn involved per structure, or it could mean narrow base towers and other designs to fit the available space, such as bridge towers or offset towers along railways as was done near St. Louis in 1950 by the Union Electric Company. Another example of compatibility occurred in Michigan when the farmers insisted that H-frame transmission structures had to have a minimum distance between the two vertical poles so that the farmer could drive his largest farm equipment between them.

So much for the woes of the right-of-way agents and the planning engineers. At least the problem has gained sufficient recognition to spur co-operative efforts to find ways to alleviate it. The *Electrical World* held its second annual right-of-way conference in March and the American Right of Way Association and Edison Electric Institute are planning committees to work on the problem. Some of the things which it is hoped can be accomplished by joint effort are:

1. PROMOTE a co-operative positive approach to the problem through informing the public and all those public bodies interested in land use of the electric utility needs for the public good. There are many ways in which to do this. The British Central Electricity Authority has used full-page newspaper advertisements to tell of the need for pylons, as they call transmission towers, and to answer the question "Why Not Put the Power Lines Underground?" A number of American utilities have prepared edu-

cational pamphlets, such as the one by Cleveland Electric Illuminating, "Why Not Put All Electric Wires Underground?"

A number of utilities have prepared brochures for use by planning bodies. A co-ordinated effort on preparing and distributing suitable literature could be helpful in gaining co-operation of everyone involved in the study of land use through understanding of the utilities' particular problem.

2. PERHAPS the schools that offer planning courses and the professors who teach these subjects could be of help through including the need for right of way for electric utilities in their curriculum and through suggestions they might develop for helping solve the problems. Since the Massachusetts Institute of Technology first established a planning school in 1929, more than twenty others have been formed. Help at this level should prove very beneficial and have long-range value to gain good will and public acceptance.

3. ENGINEERS should be civic minded and make electric systems as compatible as practical through increased use of right of way and design of substations in keeping with the neighborhood. A great deal has already been done and many articles published on making substations attractive.

4. ZONING regulations are a civic need in growing communities and since it is difficult to change them every effort should be made to get them right initially. In fact, model zoning laws should be developed and made available whenever

PUBLIC UTILITIES FORTNIGHTLY

such legislation is undertaken. Perhaps some are already in use which would be suitable for most cases.

5. FINANCIAL relief through approval for including land for future use in a company's rate base depends on convincing the utility commission or the lawmakers that such would be for the public good. Perhaps the planning engineers could be of help in this effort. Sufficient experience should be readily available to show the terrific increase in right-of-way cost, but it would be up to the planning engineer to show why some particular property would be needed for future use based on a well-prepared plan. The large savings made by an early investment should be easy to prove because even without inflation the old law of supply and demand will in itself continue to raise appreciably the cost of some property.

The question might be raised of whether present customers should pay slightly higher rates to provide carrying charges on property held so that future customers can enjoy substantial savings. The philosophy that they should seems well justified if the savings are shown to be great enough and if the investments are carefully and prudently made. If neither the present customers nor the stockholders are willing to pay the carrying charges the door is open for a third party to make the investment and also a nice profit.

6. MORE and more electric utilities are finding it necessary to purchase strip right of way instead of easements. This makes their problem more like that of highways and railroads. It would then seem as though a great deal could be accomplished by combining these various services on the same or adjacent right of way in order to save involving more farms and subdivisions than necessary.

Interest in the right-of-way problem is rapidly increasing as the problems of acquisition get greater and greater. The problem is more and more becoming one for management since it involves large expenditures of money and some very important policies for the future. No doubt a great deal can and will be accomplished through the co-ordinated efforts of the various utilities and others involved in land use. This goes for many right-of-way problems, such as relocation for highways. Co-operation between utilities could also be beneficial in the right-of-way problem associated with relocation of facilities to accommodate a highway construction program.

All efforts must necessarily be directed toward the common good and public welfare. This is well expressed in a quotation from Harvey S. Perloff's recent book, "Education for Planning," which puts it as follows: "More can be accomplished through positive developmental planning than through negative control."

"INFLATION victimizes all those people who place their savings in money and money-repayable contracts. The loss begins in the very coins and currency in the pockets and tills of our people. A large group of victims is thus found among the poorest and least prescient members of our society."

—MALCOLM BRYAN,
President, Federal Reserve Bank of
Atlanta.



Some Critical Thoughts on Cost of Capital

The determination of the cost of capital depends to a large extent on the earning capacity of a company wishing the capital. But in the case of a regulated public utility the earning capacity may, in turn, depend on the impact of the cost-of-capital approach by the regulatory authority in determining the rate of return allowance. Is this circular reasoning, which results in a built-in sort of conflict, making the cost-of-capital approach a defective one?

By LEONARD A. O'CONNOR*

PUBLIC utility commissions and their staffs have a most difficult task in their continuing deliberations as to what are "fair rates of return" for the investor-owned utilities in this country. It is no wonder that they have sought out every tool of analysis that can be used to assist them. Yet it seems to this writer that in employing the cost-of-capital approach, as commissions have done with greater frequency of late, they are utilizing a device which, while it gives the appearance of providing an impartial, mathematical answer to their problem, actually contains a built-in error of important consequence.

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It is almost as if the commissions being so close to the problem have missed something which might be obvious to one standing at a distance. The error, it is submitted, is this: Cost of capital is tied to the utility's earning ability which is itself directly related to the allowed rate of return. Therefore, using cost of capital as a determinant of rate of return is circular reasoning, and inherently fallacious.

DEVELOPMENT of a composite percentage of cost of capital requires commissions to examine the cost of debt capital, cost of preferred stock capital, if any, and cost of common stock capital. Each of these components is affected by the level of earnings, past and present, for the utility, but most clearly and to the great-

PUBLIC UTILITIES FORTNIGHTLY

est extent, the last named. In the typical case the regulatory body establishes a separate cost for each class of capital and weights them by the company's capitalization ratios to determine the composite rate. It is this rate which is then, with varying degrees of importance, used in arriving at a percentage rate of return to be applied to the accepted rate base.

The cost of debt capital used is an historical cost, derived by taking the total of present interest charges and applying it to the principal amount of the bonds outstanding. In some jurisdictions, consideration may be given to an impending bond issue at a hypothetical interest cost. Basically, however, it is an historical composite cost compiled of interest rates obtained over past decades when the company's earnings and interest coverage may have been good, bad, or indifferent, when the capitalization ratios may have been much different than at present, and when the utility's bond rating may have been one or more notches higher or lower.

WITH slight qualification, the same comments might be made about the manner in which the cost of preferred stock is obtained. It is the same process, developing an historical composite cost. For both classes of capitalization the level of earnings and the general financial health of the company in the past have determined the cost of this capital and will do so in the future. To allow these costs to govern future earnings by using them to compile a rate of return is to set a dog to chasing its tail. A utility with low-cost senior securities because of successful past years may find itself cut back in earnings at a time when it is moving into adverse times. And a utility which is growing into

strength may be given a richer return than would ordinarily be necessary.

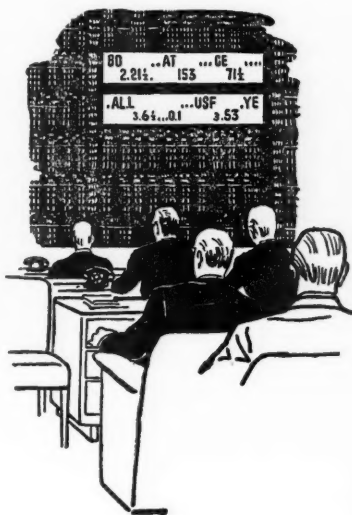
A corollary error in using an historical composite cost of capital for these securities is that it gives no weight to possible long-term trends in these costs. A utility could show the same average cost of debt whether its issues were getting progressively less expensive or more expensive. If cost of capital has any validity, setting a rate of return for present and future needs should definitely take cognizance of such a trend, but it is masked by using the historical composite cost.

IN determining a cost of common stock capital the commissions admittedly have the most difficult problem as compared with determining the cost of bond or preferred capital. Since there is no rational basis on which to develop an historical cost of common stock capital, the commissions here swing entirely about and compute a reproduction cost for that capital, assuming it had to be entirely replaced at the current market prices. The yield at which the common shares of the utility are then being traded is sometimes taken as the basis, and to this is added an adjustment for costs of issuance and for the pay-out ratio. Other times commissions will simply take the earnings-price per cent and adjust for cost of issuance. There is no real difference in the two techniques. It is a reproduction cost that is thus developed, which supposes that if the utility were to recreate its common stock equity in the existing market it would theoretically require earnings at the computed rate in order to meet the yield that the shares are currently selling at.

The primary fault with this manner of

Uncertain Equity Capital Costs

"IN determining a cost of common stock capital the commissions admittedly have the most difficult problem as compared with determining the cost of bond or preferred capital. Since there is no rational basis on which to develop an historical cost of common stock capital, the commissions here swing entirely about and compute a reproduction cost for that capital, assuming it had to be entirely replaced at the current market prices. The yield at which the common shares of the utility are then being traded is sometimes taken as the basis, and to this is added an adjustment for costs of issuance and for the pay-out ratio. Other times commissions will simply take the earnings-price per cent and adjust for cost of issuance. There is no real difference in the two techniques."



computing the cost of common stock capital, other than its basic unrealistic assumption of recreating the common equity at one swoop, is that the yield at which the utility's shares are selling is directly related to the utility's earning prospects which are in turn tied to the allowable rate of return. It is cause and effect of an obvious sort. A utility with depressed earnings, brought to a rate case, would have its common shares selling at a higher yield than ordinary. The reduced coverage for the dividend, or investor disinterest caused by the lowered earnings, or both, would have driven the yield up. Under this condition its cost of capital and therefore its rate of return would automatically be higher than another utility whose earnings were not temporarily reduced. While its cost of capital is higher

perforce, there is no reason why its rate of return, which is to be set for an indefinite time, should be higher than for other utility companies.

A SECOND fault with this method of establishing a cost of capital for common stock equity is that it is strongly subject to extraneous influences in the securities market. A utility whose rate level was under adjustment during a period of declining stock market values would fare better, relatively, than another similar utility whose rate proceeding occurred during a strong phase of the market. There is no justification for a procedure which makes the levels of rates for utility customers subject to the prevailing tenor of the securities market at the time the rates were being determined.

PUBLIC UTILITIES FORTNIGHTLY

It is also disturbing that this mechanism identifies market value of the utility's common stock, on which the yield or price-earnings ratio is based, with the book value of the common stock and surpluses, to which the derived percentage is applied. This can lead to unfair consequences. Suppose, as a simplified example, we consider a company with a capitalization made up of 100 per cent equity. If that company's shares were selling to yield 6 per cent and a 6 per cent return were consequently granted to the company, it would not be enough to pay the dividend if the shares had a market value above the book value. This example, which disregards expense of issuance and assumes a 100 per cent pay-out ratio, can easily be proven by using dollar amounts of earnings equivalent to the 6 per cent allowable return. To the degree that common shares sell above book value, which is marked in many instances, the utilities are harmed by this procedure.

TAKING all into account, then, the regulatory body after determining the historical composite costs of debt capital and preferred stock capital, combines the two with a replacement cost of common stock capital. This is surely mixing pears and peaches. The level of current earnings dominates the cost of common stock capital, while it is earning performance in the past which influences the costs of the senior capital. We would be on somewhat firmer ground theoretically, if cost of capital is to be used at all, if we were to use a replacement cost for the entire capitalization as a guide to the necessary level of earnings for the future.

In addition to the major premise set forth above, that the use of cost of capital

is not a proper determinant of rate of return since it is not independent, there exists another group of reasons that argue against its use. These are in the area of compensatory action that utilities may undertake to protect themselves against cost-of-capital rate regulation.

The first of these is that utilities may begin to manipulate dividend policy—*i.e.*, pay-out ratio—in order to attain a more favorable cost of common stock capital for rate proceedings purposes. A utility, without substantial change in per share earnings, could raise its dividend by increasing its pay-out percentage and thereby increase its stock's market yield and price-earnings ratio. A stock with a pay-out of 90 per cent will generally sell at a higher yield and higher price-earnings ratio than one with a pay-out of 70 per cent. The possibility of utilities adjusting their basic financial policies so as to be accorded better treatment in a rate proceeding is foreign to the best interests of rate-payers and possibly to investors also in the long run. Yet utility managements may avail themselves of this device if cost-of-capital regulation becomes sorely discriminatory.

THE use of the cost-of-capital approach by regulatory commissions could also, taking another turn, lead to a situation wherein utilities find themselves less concerned with the relative cost of capital. If a higher cost of capital is to be allowed as a basis for a higher rate of return, will not the historical search for low-cost capital by utilities seem less pressing? The adverse effect this would have on rate levels is manifest.

Consideration of cost of capital invariably leads the regulatory commission into

SOME CRITICAL THOUGHTS ON COST OF CAPITAL

the area of capital structure, which is traditionally the responsibility of management. Granted a given rate of return, a utility should have the privilege of using a large proportion of common stock financing and returning a relatively low but stable return on this capital, or using a large proportion of debt capital and giving the common stockholders a higher return, but subject to all the short-term effects of leverage. And who is to say which is the least expensive form of capitalization over the years when all factors are considered?

THE problem of rewarding an efficient management within the rate of return formula which comes up from time to time (and usually disappears again without solution) can be reasonably treated by eliminating cost of capital as a controller of rate of return. By obtaining its capital at a price below the fair rate of return allowed the utility, an efficient management can generate its own reward for itself and the common stockholders without the commission's concern. Since sound engineering and careful administration can indirectly result in lower capi-

tal costs, this method of recompensing an efficient management is not limited to those managements whose forte is the astute timing of security sales.

SOMETIMES an analogy is helpful in securing a point of argument. If a coal company which was supplying an electric utility adopted a policy of charging a per ton price which varied directly with the utility's current rate of return, can we imagine that the state regulatory commission would long allow that price as a legitimate operating expense in fixing a rate of return? Certainly not, and yet commissions are doing exactly this in using cost of capital as a determinant of rate of return. The utility industry would be much better off if cost of capital were left a problem of management as one of the risks of the business, and regulation looked elsewhere for a yardstick of fair rate of return. Where else it is not here suggested, but it is felt that it would be better to take an entirely subjective approach, or adhere to the time-honored basis of 6 per cent as reasonable, than to follow a course which is demonstrably self-defeating.

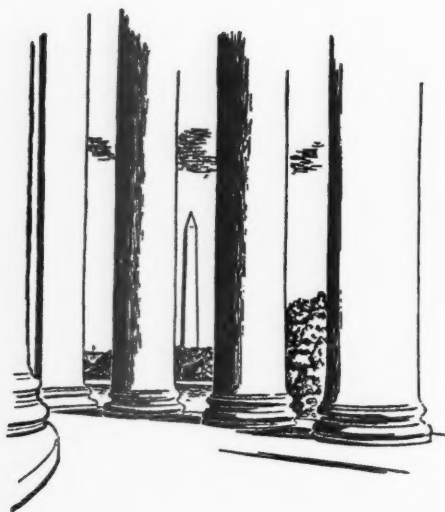
"In our country corporate enterprise and our system of Capitalism exist solely under a franchise from the public.

"No enterprise can ever safely take this franchise for granted. If the franchise is to be maintained in future years the public must become far better informed and more thoroughly convinced of the soundness of our system of corporate enterprise.

"For this reason it is a cardinal principle of public relations—as we understand it in America—that all corporate enterprise must be conducted in ways that serve the public interest.

"Business of necessity must ALWAYS give first priority to profits—but never at the expense of good will. For the loss of good will means the loss of a priceless asset—one indeed indispensable for profitable operation."

—JOHN W. HILL,
Chairman of the board,
Hill & Knowlton, Inc.



Freight Taxes Repealed

THE Senate on June 26th voted approval of a compromise agreement reached by Senate-House conferees repealing taxes on freight but retaining the 10 per cent tax on airline, bus, and train passenger transportation.

Under the agreement the 3 per cent tax on transportation of property, and the special taxes on coal and oil transport by pipeline, will be repealed as of August 1st. The House agreed to act the following day on the compromise.

Dan Throop Smith, Treasury tax spokesman, who was present when the compromise agreement was approved by the House-Senate committee, expressed "deep disappointment" that President Eisenhower later signed the legislation. Senator Byrd (Democrat, Virginia), Senate Finance Committee chairman, who announced the compromise action, said the freight repealer will cost an estimated \$485 million of revenue. By refusing to approve the repeal of the 10 per cent passenger tax, the conferees saved the Treasury an estimated \$225 million of revenue.

JULY 17, 1958

Washington and the Utilities

The transportation tax amendment was added in the Senate last month to legislation extending for another year from July 1st, the existing taxes on corporations and the so-called Korean excises on liquor, cigarettes, automobiles and parts. These taxes, which were scheduled under the present law to expire at midnight June 30th, involve an estimated \$2.5 billion of revenue. The net loss to the Treasury on the freight tax will thus reduce the yield on the extension bill to just over \$2 billion.

THE administration originally asked that the taxes due to expire June 30th be extended without any tax reduction amendments being attached. The President said he was opposed to any reduction of revenue in view of the prospective deficits the Treasury is facing for this year and next. The House passed the extension bill as the administration asked with no revenue loss, but the Senate by a vote of 59 to 25 voted to repeal all transportation taxes.

It is understood that Robert B. Anderson, Secretary of the Treasury, conferred with House leaders in an attempt to have

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WASHINGTON AND THE UTILITIES

them stand fast against accepting the Senate action. House conferees suggested that the tax on transportation by oil pipeline be retained as well as the tax on bus, plane, and train tickets, but the Senate group pointed out that oil and coal are competitive and that if the tax on one was approved the other should be given relief, too. Senator Smathers (Democrat, Florida), author of the original transportation tax repeal amendment, agreed to go along with the compromise on freight repeal only, although he said he felt certain that the country wanted repeal of passenger taxes, also. He stated on the Senate floor, however, that he would move later on to repeal the passenger tax.

Two tax measures are still slated to come before Congress at this session. One is a huge technical revision bill, which the House already has voted, and the Senate Finance Committee has approved an amended version for early action. The second tax measure is expected to be one to give special relief to small business. This measure has been requested by the administration and is still being completed by the House Ways and Means Committee.

Smathers might offer his amendment on passenger taxes to either of these measures. There have been strong intimations from administration sources, however, that it will go no farther than the freight tax repealer and if any further cuts are attached to forthcoming legislation a veto is likely.

Rivers and Harbors Bill Passes

A SENATE-HOUSE conference finally agreed to iron out differences in the first general rivers and harbors bill in four years. As passed by the House, the

Senate-approved bill (S 3910) sought to compromise differences with the administration which resulted in presidential vetoes of two earlier versions. The new bill provides a total authorization of over a billion and a half dollars. The Engineers Corps will get more than \$600 million in authorizations and the Interior Department \$250 million.

Items of particular interest to electric utility companies include the following projects: Penstocks for possible future development of power will be included in dams above the Millwood reservoir, for which \$53.2 million will be authorized for the Red-Ouachita river basin. In Georgia the Hartwell reservoir will receive a little over \$44 million to finish up the program. The White river basin in Arkansas will receive increased authorizations amounting to \$57 million, but the Senate had already knocked out attempts to include funds for planning additional power features. Planning funds for a new project, the Bruces Eddy, Idaho, were included, amounting to \$1.2 million.

A limited interpretation of the preference clause was settled in conference. South Dakota, mostly served by business-managed electric companies not eligible to buy power as preference customers, will be assured of a "reasonable amount" of power. South Dakota had contended it did not receive a fair share under previous interpretations of the preference clause reserving power from federal dams to government power distribution agencies.

THE conference worked out a compromise whereby any state where a Missouri basin power dam is located can be allocated a share (to be fixed by the Secretary of the Interior) up to 50 per cent of the power, provided only that that allocation is distributed first to preference customers in that state. This means,

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where there are few or no preference customers, the state's share may then be sold to private companies regardless of requests from preference customers in other states.

Both houses of Congress approved the conference report and the President was expected to sign.

European Atomic Plant Aid

PRESIDENT Eisenhower's program for aiding atomic power plants in Europe is due for prompt approval. Under this program the United States will co-operate with the European Atomic Energy Community (Euratom). It is part of the President's atoms-for-peace plan under which the United States would contribute nuclear fuel, industrial knowledge, and long-term credits. Euratom would then be able to build six large nuclear power plants in Western Europe with 1 million kilowatts of capacity.

There are three purposes to be served: (1) economically strengthening Western Europe by reducing the cost of energy imports and dependence on Middle Eastern oil; (2) assisting unification of Western European nations by combining six of them in common projects which could lead to political unification as well; and (3) establishing a pattern and providing experience for atomic power plant operations from which the world could benefit.

Eisenhower's message stressed the fact that this is not a "giveaway" program. Euratom will itself make the original expenditures of capital and will buy supplies of atomic fuel from the AEC at regular prices. However, easy credit terms will be provided. Both American and European industries are expected to co-

operate in building American-type reactors. The benefit of European scientific knowledge will be made available to American industries and government.

Opposition was more technical than substantial. One problem has involved inspection to prevent atomic materials being used for military purposes. To solve this, Euratom—as a sovereign international body in its own right—will be held responsible for inspection. AEC will approve the inspection system and have a voice in its arrangement. The whole program is expected to strengthen the world position of the Western European allies.

THE United States will help Japan build a 150,000-kilowatt nuclear power plant. Under terms of the agreement, signed recently, the AEC will furnish technological assistance and materials. The full-scale Japanese nuclear plant will require 2,700 kilograms of uranium 235—approximate value \$4.6 million—over the next ten years. Japan also plans a 15,000-to-20,000-kilowatt experimental power reactor.

The World Bank has approved a \$37 million loan to the Kansai Electric Company, a Japanese private utility, to help finance construction of a 258,000-kilowatt hydroelectric project in the mountains of central Japan. Japan is the thirteenth nation to negotiate a nuclear power agreement with the United States under the "atoms-for-peace" program of the President.

Where research reactors are involved, the U. S. agrees to pay one-half the cost of the reactor or \$350,000, whichever is less, and to lease the fuel required. When a reactor is built for power production, the nuclear fuel is sold outright.

Telephone and Telegraph



Lease Line Rate Cut

THE government decided on June 25th that American Telephone and Telegraph Company is making too much profit on its private telephone line service and ordered the firm to cut rates for this service by about 15 per cent. The Federal Communications Commission order is effective in sixty days. Commissioner Craven dissented.

The order does not change rates for telephone service used by the general public, telegraph services maintained by AT&T, or wire circuits supplied to TV and radio stations for program transmissions. Privately leased telephone circuits are used primarily by government agencies, stockbrokers, banks, large industries, and others interested in maintaining continuous communications between distant points.

The lower rate will affect primarily the Defense Department. It has a contract with the AT&T for a large number of private telephone lines linking the SAGE radar defense warning system being built across the country.

Frederick R. Kappell, AT&T president, in New York said there was no justification for the rate cut. The order resulted from a three-year FCC investigation into a proposal by AT&T to offer major dis-

counts to customers contracting for multiple private line service. An FCC study showed that AT&T's revenues would be reduced by \$5.7 million a year under the 1955 traffic volume, the year used in the study. However, officials said the use of private lines has expanded so greatly during the last three years the net revenue reduction based on today's business would be substantially larger.

THE FCC said an analysis of AT&T figures showed it is earning at least 10.5 per cent on its investment in private line telephone facilities. The commission said it feels this is excessive. The FCC said AT&T's return on total interstate net investment in 1957 was approximately 7 per cent and that the private line services accounted for only about 3 per cent of the firm's gross interstate revenues.

The General Services Administration, which took part in the studies, had suggested a 25 per cent reduction in private line rates. The FCC said recently that although the action was at least a partial grant of the GSA petition, the reduction order was based on the FCC's own motion.

Kappell said the FCC action will result "in earnings on the private line portion of our business, including both telephone and telegraph, being slashed to the con-

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fiscatory level of less than 4½ per cent, despite the fact that current rates for these services are from 30 to 50 per cent below prewar levels."

Judge to Judge Miami TV Case

THE Federal Communications Commission has named Horace Stern, Philadelphia, recently retired chief justice of the Pennsylvania supreme court, to re-examine the grant of Miami's television Channel 10 to a subsidiary of National Airlines, Inc. Spokesmen for the commission said this is the first time that an outside party has been called to hear an FCC case.

The commission awarded Channel 10 to Public Service Television, Inc., in February, 1957. The grant was protested by WKAT, Inc., a Miami radio station. A congressional subcommittee heard testimony that former FCC Commissioner Richard A. Mack had been approached by various parties interested in the award. Mr. Mack resigned last March.

The FCC has regained jurisdiction of the Channel 10 case from the federal district court of the District of Columbia where it went as a result of the WKAT protest. Judge Stern will consider whether any member of the commission should have disqualified himself from voting in the proceedings; whether the parties in the proceedings knew of actual misconduct; and whether the grant should be set aside.

A prehearing conference was held in Washington, D. C., on June 23rd. Other hearings may be held outside of Washington. The Attorney General is participating in the hearings as a friend of the court. The commission said it is "highly gratified that such an outstanding jurist will sit as a disinterested yet highly qualified expert to give legal consideration to

the particular issues in this important case."

Bell System Gets Citation

THE Reserve Officers Association of the United States announced last month the selection of the Bell telephone system to receive ROA's highest award, the "Distinguished Service Citation," for outstanding contribution to national defense. Brigadier General Delesseps S. Morrison, ROA's national president, cited the Bell system for providing "a bulwark of security behind such scientific developments as the Dew Line and numerous defense projects, many of them still secret."

Formal presentation of the award was made at ROA's annual convention banquet at Atlantic City, New Jersey, on June 27th. U. S. Senator George Smathers, a Colonel in the Marine Corps Reserve, was scheduled to make the presentation, to be received by Clifton W. Phalen, executive vice president of the American Telephone and Telegraph Company. The award, first to be presented to an industrial organization by the Reserve Officers Association, cites the Bell system for "establishing the concept of national defense as a primary function of the nation-wide communication service in which it is engaged." The award also notes that the Bell system companies have made their resources readily available to the civilian and military services when needed.

Phone Excise Taxes Unchanged

THE House on June 26th finally rejected part of the transportation excise tax repeals voted by the Senate on June 19th and the Senate agreed to the change. The upper chamber on the earlier

TELEPHONE AND TELEGRAPH

date approved the repeal of the 3 per cent freight tax, and also elected (by a vote of 50 to 35) to go along with another "rail relief" proposal to eliminate the 10 per cent tax on interstate passenger fares for the railroads. On behalf of the telephone companies and their subscribers, Senator Douglas (Democrat, Illinois) tried hard for a repeal of the excise taxes on telephone service. Douglas was able to get a fairly close vote (43 to 32) rejecting the amendment to do away with the excise taxes on local telephone exchange service. Another move by Douglas to lower excise taxes on long-distance telephone calls from 10 per cent to 5 per cent was defeated by a one-sided vote of 55 to 20.

These votes were upon amendment to an overall bill to continue the present corporate, excise, and income taxes. The Senate voted down all other attempts to repeal excise and income taxes. Final action was hastened, to have the bill on the President's desk by the last day of the fiscal year. Proponents of reduction in telephone and transportation excise taxes are now considering the possibility of an indirect approach whereby a time limit would be put on the present excise taxes. This would require positive action by Congress to extend such taxes after a specified expiration date.

REA Committee Recommendations

THE REA telephone advisory committee is satisfied with the rural telephone loan program to date. Results of a meeting held last May were recently made public by REA Administrator David A. Hamil. It recommended no changes in

basic REA policy. The committee, composed of members from commercial telephone companies, as well as REA co-ops and REA staff, found that after eight years of experience with the telephone amendment, REA has satisfactorily proven the adequacy of the plan enacted by Congress. The committee suggested that "no modification of the present act be made." This was seen as an indirect reference to proposals from the administration and other quarters that the present low 2 per cent interest rate should be increased.

The committee recommended that telephone systems plan and construct rural telephone exchanges on an area coverage basis. It urged that state associations and other groups and organizations encourage and assist rural telephone companies and co-operatives to aid them in the development of such a program. The committee "recognizes that area coverage necessitates adequate planning and, in some instances, consolidation of small operating units."

The committee also recommended that REA initiate and proceed with a nationwide survey to determine the quantity and location of unserved rural establishments, prospects of growth and financial requirements—providing that industry-wide co-operation is obtained to facilitate the task. The committee, it was reported, does not intend that present loan and engineering personnel be diverted from their present assignments due to this job, but rather that national and state association personnel and other industry people be enlisted to assemble the data. It was further recommended that the data accumulated and the information so developed "be compiled by REA and made available to the telephone industry."



Financial News and Comment

By OWEN ELY

Deferred Taxes—How the Issue Is Working Out in Rate Cases

THE Federal Power Commission has recently amended its uniform system of accounts to provide for deferred taxes.¹ The amendments follow the line of the commission's decision in the Amere Gas Utilities Company case, which permitted the company to use deferred tax accounting under accelerated depreciation. The commission apparently has not reached any hard and fast conclusions, since its accompanying order makes the following statement:

"As this record shows, there are both advantages and disadvantages to the use of either the reserve or the restricted surplus treatment in accounting for accumulated deferred taxes. It is argued that the reserve treatment is superior in more directly providing for future tax liability. However, the reserve treatment necessarily emphasizes a liability concept, although the accumulated tax deferrals cannot be said to represent an actual indebtedness. Even though tax deferrals have certain aspects as a long-term debt, their evaluation as an existing liability cannot be fully justified considering the

long-term and noninterest-bearing features.

"In favor of the restricted surplus treatment it is argued that the temporary classification of deferred tax amounts as equity capital sufficiently provides for such accumulations as may be needed for future taxes while improving the rating of the company's securities and reducing its cost of financing. On the other hand, it is evident that classification of tax deferrals as surplus, even though restricted, tends to disregard their essential character as provisions from income committed to the single purpose of providing for future taxes.

"**I**N fact, we think that none of the balance sheet categories of the commission's Uniform System of Accounts is entirely suitable for the extraordinary accounting which tax deferral requires.

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¹ EDITOR'S NOTE: For a critical analysis of the content and import of this decision, see article in "What Others Think" department, beginning page 113, this issue.

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In view of the differences of opinion and conflicting considerations present, what is called for, in our judgment, is a separate balance sheet classification for accumulated deferred taxes. This will assure clear disclosure of this important item and lessen the possibilities of misunderstanding and misinterpretation of the nature and purposes of accumulated tax deferrals. It will meet the intent of Congress that the funds generated from the effect of accelerated amortization and liberalized depreciation be available to the utilities for plant expansion. And while making provision for future tax liability, will not foreclose financial analysts, investors, and others from considering these amounts as part of equity capital if they think proper, with such consequential benefits to the rating of the company's securities and costs of financing as may result therefrom. . . .

"In view of the fact that some state regulatory commissions also having accounting jurisdiction have specified the restricted surplus treatment and others the reserve treatment, some parties urge that we adopt accounting provisions which would permit either such treatment. In our opinion, this dual or alternative treatment would cause intolerable confusion and conflict in the commission's prescribed accounting and would be contrary to the public interest. We regret the inconsistency which has arisen among the several state commissions. Under the circumstances, however, we see no reasonable solution to the problem for those utilities which are required by a state commission to report deferred taxes as a reserve or restricted surplus but to classify the deferred taxes in accordance with state requirements for state purposes, and to use the treatment specified by this order for the purposes of this commission."

It would seem that the nonmandatory feature could result in confusion to the

public, who will not understand why the provision for deferred taxes is an expense for one company but income for another.

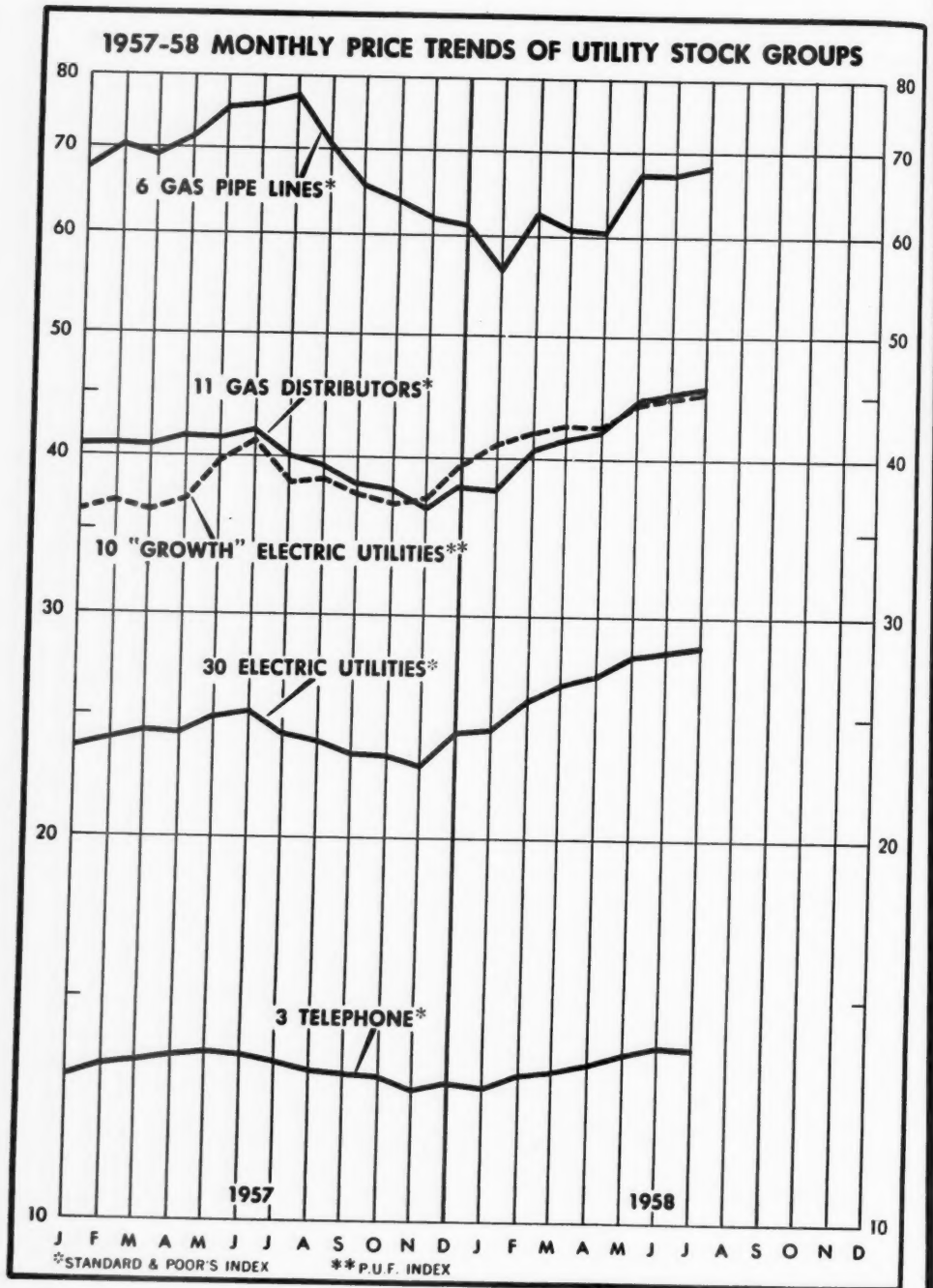
The real test of the treatment of deferred taxes resulting from accelerated depreciation therefore appears to be in the decisions of state or federal commissions in applications for rate increases, which in some instances have been at variance with earlier accounting orders of the same commissions. Following is a general summary of these decisions, designed merely to show their trend with respect to the main essentials:

Federal Power Commission. Examiners' decisions (subject to review by the commission) during March permitted Michigan Wisconsin Pipe Line Company and El Paso Natural Gas Company to normalize deferred taxes.

California. In certain of the rate increases allowed during 1957-58 the commission has left the door open for reconsideration of this matter. It has indicated in the Southern California Edison and other cases that if the company decides to avail itself of accelerated depreciation in 1958 and to "normalize" the savings rather than pass them through to net income (and thus to the consumer) the companies should notify the commission of their election to use accelerated depreciation, at which time the commission will take such action as it believes necessary. In some rate cases, the companies have elected not to take accelerated depreciation for income tax purposes and the commission has allowed income taxes computed by deducting straight-line depreciation.

IN the case of Citizens Utilities Company of California (March 11, 1958) the commission went a step further and indicated that if the company decided not to use accelerated depreciation and obtained the approval of the Internal Reve-

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nue Service for returning to the earlier method of accruing depreciation on a straight-line basis, the commission would then analyze the effect on customers of the isolation for federal income tax purposes of depreciable plant existing prior to January 1, 1954, due to the management's initial election. This reservation is not clear, unless it may be taken to indicate that deferred taxes for the years 1954-57 would be taken into account in reopening the rate case.

In the California Electric Power rate case the company adopted the flow-through method for tax savings resulting from accelerated depreciation. The commission indicated that the possible added tax burden on future consumers would be a problem to be recognized by the commission only at such future date.

Connecticut. In the case of Housatonic Public Service Company (January 22, 1958) the company indicated that it would discontinue using accelerated depreciation, and stated that if in future it should decide to go back again to accelerated depreciation it would actually refund the resulting tax savings to consumers until such time as the rates could be formally reviewed.

Florida. In the decision affecting Gulf Power Company the company was apparently permitted to normalize, though the commission made no definite statement to that effect.

Georgia. In the Atlanta Gas Light Company case of April 18, 1958, deferred taxes were allowed in the income account and the reserve could be deducted from the rate base.

ILLINOIS. The commission, in several cases decided over the past six months, has permitted deferred taxes. In one case the resulting reserve was deducted from the fair value rate base and in another it

was considered in determination of the rate of return.

Indiana. Deferred taxes were permitted in the decision affecting Public Service of Indiana, Inc., and no adjustment was required in the rate base. The courts confirmed this.

Kansas. In the Empire District Electric decision of January 29, 1958, deferred taxes were allowed and were reflected in the rate of return computation.

Kentucky. There have been five decisions in late 1957 and early 1958. In all of these deferred taxes were allowed, and the reserve was deducted from the rate base.

MAINE. In the Central Maine Power Company decision of March 15, 1957, normalization of deferred taxes was disallowed, and this was sustained by the courts.

Massachusetts. In the Plymouth County Electric Company decision of February 28, 1958, the commission did not rule directly on the matter, but apparently allowed the deferred tax item to stand in the income account, with no deduction of a reserve in the rate base.

Michigan. In the Michigan Consolidated Gas Company case of February 6, 1958, deferred tax normalization was allowed. This was also reflected in the rate of return computation.

Missouri. In three cases (Joplin Water Works, Missouri Power & Light, and Empire District Electric) deferred taxes were disallowed. In the Raytown Water Company case of March 20, 1958, the company was permitted to return to straight-line depreciation for tax purposes.

Nevada. In the Southern Nevada Power case of March 20, 1958, the company was allowed to use deferred taxes, and a reserve for taxes was not required as a deduction from the rate base.

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New Hampshire. In the case of Public Service Company of New Hampshire, decided April 16, 1957, deferred taxes were disallowed.

New Jersey. In the 1957 cases of three small water service companies, deferred taxes were disallowed.

NEW MEXICO. In the Lea County Gas case, decided in 1955, the commission did not permit deferred taxes. Apparently, however, this was reversed in the case of General Telephone Company of the Southwest in the commission's or-

der of May 28, 1956, when it approved tax deferrals for rate purposes.

New York. In the New York Water Service Corporation decision of January 13, 1958, the commission did not comment on the question of deferred taxes but apparently gave "silent approval" to normalization.

The New York commission has never published its findings on the subject, although extensive hearings were held some two years ago. The practice among important utilities in the state is divided, some normalizing deferred taxes while



JUNE UTILITY FINANCING PRINCIPAL PUBLIC OFFERINGS OF ELECTRIC AND GAS UTILITY SECURITIES

Date	Amount (Mill.)	Description	Price To Public	Under- writing Spread	Offer- ing Yield	Aver. Yield For Securities of Similar Quality	Moody Rating	Success Of Offer- ing
Bonds and Debentures								
6/4	\$50.0	Cons. Edison 1st 4s 1988	102.66	.62C	3.85%	3.69%	Aa	d
6/10	10.0	New England Power 1st 4s 1988	102.66	.81C	3.85	3.70	Aa	c
6/11	25.0	Virginia Elec. 1st 3½s 1988	100.98	.83C	3.82	3.70	Aa	c
6/12	50.0	Niagara Mohawk Power 1st 3½s 1988 ..	101.34	.75C	3.80	3.70	Aa	d
6/17	15.0	Oklahoma G. & E. 1st 3½s 1988	101.00	.69C	3.82	3.70	Aa	c
6/18	25.0	Delaware P. & L. 1st 3½s 1988	100.44	.70C	3.85	3.70	Aa	c
6/18	3.0	Community P. S. 4½% S. F. Deb. 1978 ..	101.67	.97C	4.25	3.94	A	c
6/19	16.0	Mountain Fuel Supply 4% S. F. Deb. 1983	100.00	1.00N	4.00	3.94	A	c
6/19	3.0	Fall River Elec. Lt. 1st (s.f.) 4½s 1988	102.11	1.25C	4.25	3.94	A	a
6/25	12.0	Central Ill. Lt. 1st 4s 1988	100.87	.91C	3.95	3.70	Aa	b
6/25	20.0	Pacific P. & L. 1st 4½ 1988	100.42	1.40C	4.35	4.23	Baa	c
6/26	40.0	United Gas Corp. 4½% S. F. Deb. 1978	102.30	.97C	4.45	4.23	Baa	a
Preferred Stocks								
6/4	6.1	Pennsylvania Power 4.64% (\$100 Par)	101.98	1.72C	4.55	4.35	—	c
6/4	15.0	Texas East. Trans. 5.80% (s.f.) (\$100 Par)	100.00	3.00N	5.80	4.71	—	a
6/4	10.0	Texas East. Trans. 5.35% Sub. Conv. (\$100 Par)	100.00	3.00N	5.35	—	—	a
6/11	3.0	Southern Union Gas 5.35% (\$100 Par)	100.00	2.00N	5.35	4.71	—	a
6/18	12.0	Arizona Pub. Ser. \$2.40 (\$50 Par) ...	50.00	.95N	4.80	4.34	—	a
							Earns.- Price Ratio	
Common Stock—Offered to Stockholders								
6/18	44.1	Pacific Gas & Electric	52.00	N	4.62	4.35	6.9%	g
6/19	15.2	Northern Indiana P. S.	40.50	.60N	4.94	4.37	7.5	g
6/27	3.6	Atlanta Gas Light	29.50	.20N	5.42	4.59	10.6	h
Common Stock—Offered to Public								
6/6	.3	Florida Public Utilities	13.00	.85N	5.00	—	9.7	

C—Competitive. N—Negotiated. a—Reported the issue was well received. b—Reported the issue was fairly well received. c—Reported the issue sold somewhat slowly. d—Reported the issue sold slowly. g—Offered on 1-for-10 basis. h—Offered on 1-for-8 basis.

Source, Irving Trust Company

FINANCIAL NEWS AND COMMENT

others use the flow-through method.

North Dakota. In the Montana-Dakota Utilities Company case of January 24, 1958, normalization was not permitted.

Ohio. In the Ohio Fuel Gas Company case of June 11, 1958, deferred taxes were permitted and the interest-free capital was considered in the rate of return.

Oklahoma. In the Oklahoma Natural Gas decision of December 24, 1957, deferred taxes were allowed, and no adjustment of rate base was required.

Pennsylvania. In several cases during 1955-57 (affecting gas and water rates) deferred taxes were not allowed. Some utilities have indicated that they might discontinue using accelerated amortization if the benefit is to "flow through" to the consumer.

West Virginia. In the Hope Natural Gas Company decision of April 18, 1958, deferred taxes were not allowed.

WISCONSIN. Deferred taxes have been permitted, with a balance sheet credit to the depreciation reserve, which has the same effect as deduction of a reserve from the rate base. No rate cases are reported as yet, but the commission has indicated in its accounting orders that the procedure would be the same.

Wyoming. The decision affecting the United Telephone Company of the West, rendered March 24, 1958, permitted deferrals and did not require deduction of a reserve from the rate base.

Thus, subject to the reservations as summarized above, it appears that 15 commissions (including the FPC) have approved normalization, while 10 seemed to disfavor it.

The department is indebted to F. M. Beatty of Arthur Andersen & Co. for advice with respect to the status of certain cases.

Canada Claims Six-mill Atomic Power Possible in 1960's

CANADIAN officials at the Chalk River atomic energy plant believe they have developed a simplified nuclear reactor which will make electric power competitive with coal, at the present price around \$8 a ton. The story appeared in the June 26th issue of *Northern Miner*, well-known Canadian publication.

Dr. W. B. Lewis, in charge of Chalk River research, was quoted as stating: "We are not stopping at just beating coal at \$8 per ton. We fully expect to go beyond that in power-cost cutting, which would accelerate the building of nuclear power plants not only in Canada but in the U. S. and other countries." Canada is, of course, heavily interested in promoting civilian use of uranium, of which it is an important producer.

The new reactor is expected to produce economies in several ways, as compared with U. S. reactors. Instead of a protective shell weighing perhaps 500 tons, tubes of zirconium alloy will be made to withstand heavy pressure, and enclosed only in a light metal shell. The tubes will contain fuel, with heavy water as the heat transfer agent. The heavy water will absorb the heat and then carry it to the exchanger to make steam. It is understood that natural rather than enriched uranium is used as fuel, and used only once without any recycling; less than one per cent of the latent heat will be obtained. However used fuel will be stored for further use in perhaps a decade, by which time short-lived radioactive products will have decayed. At that time the valuable plutonium and unburned U-235 can be recovered more easily.

It appears likely that both England and Canada will continue to promote the use of natural uranium in their reactors since this would create a bigger initial demand

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for uranium and also simplify the sale of their reactors to other countries. U. S. research is based almost entirely on the use of enriched uranium.

THE method of charging and discharging fuel is said to make the reactor highly efficient. Fuel is prepared in small amounts and fed in and out by remote control at both ends of the reactor. (Putting in new fuel automatically pushes out spent fuel.) Charging will be alternated between reactor ends and this is said to maintain more uniform heat generation throughout.

Dr. Lewis expects to make further progress over the next five years in the use of new and cheaper alloys for fuel cladding. Further research into the relative advantages of higher temperatures

and lower pressures might prove advantageous, since the former would provide more heat and the latter would cut capital costs. For the present, heavy water is used because of the increased supply and the decrease in cost (which has dropped from \$80 to \$28 a pound, with further reductions hoped for).

The present project was a joint program of the AECL, the Ontario Hydro-Electric Power Commission, and Canadian General Electric. Construction of a 20,000-kilowatt pilot plant embodying some of the new ideas is understood to be projected for completion by 1961. This plant will not be able to incorporate all the savings anticipated from the new processes, but will serve as a guide in designing a commercial plant of 200-300,000 kilowatts which may be built near Toronto.



RECENT FINANCIAL DATA ON GAS UTILITY STOCKS

Annual Rev. (Mill.)		6/25/58 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	% In- crease	Aver. Incr. In Sh. Earnings 1952-57	Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity
Pipelines and Integrated Systems										
\$ 5	O	Ala.-Tenn. Nat. Gas	23	\$1.20	5.2%	\$1.66Ma	21%	13%	13.9	72% 41%
192	S	American Nat. Gas	61	2.60	4.3	4.14Ma	7	12	14.7	63 33
58	A	Arkansas Louis. Gas	35	1.20	3.4	1.85De	19	47	18.9	65 52
57	O	Colo. Interstate Gas	45	1.25	2.8	2.23Ma	NC	—	20.2	56 23
376	S	Columbia Gas System ...	19	1.00	5.3	1.44Ma	3	12	13.2	70 44
7	O	Commonwealth Gas	6½	—	—	.40De	D26	0	16.3	— 77
17	O	Commonwealth N. G. ...	39	1.80	4.6	3.39Ma	18	—	11.5	53 43
11	S	Consol. Gas Util.	18	.90	5.0	1.69Ap	D7	6	10.6	53 60
280	S	Consol. Nat. Gas	48	2.00	4.2	3.58Ma	NC	12	13.4	56 61
18	O	E. Tenn. Nat. Gas	10	.60	6.0	.89Ma	6	—	11.2	67 20
301	S	El Paso Nat. Gas	33	1.30	3.9	2.39De	13	12	13.8	54 20
46	S	Equitable Gas	33	1.60	4.8	2.23Ma	D2	4	14.8	72 42
24	O	Gulf Interstate Gas	14	.50	3.6	.85De	10	—	16.5	59 21
27	O	Houston N.G.	25	.80	3.2	1.72Ja	36	8	14.5	47 27
20	O	Kansas-Nebr. Nat. Gas .	38	1.80(f)	4.7	2.55Ma	9	12	14.9	71 32
104	S	Lone Star Gas	40	1.80	4.5	2.48Ma	12	10	16.1	73 43
75	S	Miss. River Fuel	32	1.60	5.0	2.00De	D14	2	16.0	80 49
26	S	Montana Dakota Util. ..	28	1.00	3.6	1.55Ma	9	12	18.1	65 31
25	O	Mountain Fuel Supply ..	27	1.20	4.4	1.72Ma	NC	8	15.7	70 62
86	S	National Fuel Gas	21	1.10	5.2	1.39Ma	D17	—	15.1	79 58
129	S	Northern Nat. Gas	28	1.40	5.0	1.68Ma	D8	7	16.7	83 34
43	S	Oklahoma Nat. Gas	34	1.50	4.4	2.09Ap	6	6	16.3	72 34
117	S	Panhandle East. P. L. ...	48	1.80	3.8	2.74De	—	2	17.5	66 41
13	O	Pennsylvania Gas	23	1.20	5.2	2.18De	D3	4	10.6	55 59
174	S	Peoples G. L. & Coke ...	46	2.00	4.4	3.07Ma	7	7	15.0	65 39
101	S	Southern Nat. Gas	39	2.00	5.1	2.13Ma	D1	4	18.3	94 46
38	O	Southern Union Gas	27	1.12	4.1	1.53De	—	10	17.6	73 31
313	S	Tenn. Gas Trans.	28	1.40	5.0	1.99My	NC	10	14.1	70 19
175	O	Texas East. Trans.	29	1.40	4.8	2.65Ma	46	25	10.9	53 18

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Annual Rev. (Mill.)	(Continued)	6/25/58 Price About	Dividend Rate	Approx. Yield	Recent Share Earnings	% Increase	Aver. Incr. In Sh. Earnings 1952-57	Price-Earn. Ratio	Div. Pay-out	Approx. Common Stock Equity
96	O Texas Gas Trans.	24	1.00(b)	4.2	2.07Ma	D1	16	11.6	48	27
97	O Transcont. Gas P. L. ...	22	1.00(b)	4.5	1.36De	13	29	16.2	74	21
300	S United Gas Corp.	32	1.50	4.7	2.52Ma	4	12	12.7	60	41
Averages				4.5%				14.9	66%	
<i>Retail Distributors</i>										
28	S Alabama Gas	32	\$1.60	5.0%	\$2.86Ma	36%	15%	11.2	56%	42%
44	O Atlanta Gas Light	32	1.60	5.0	3.21Ap	40	5	10.0	50	33
2	O Berkshire Gas	16	1.00	6.3	1.20F	D21	53	13.3	83	36
6	O Bridgeport Gas	32	1.60	5.0	1.93Ma	D27	1	16.6	83	50
5	O Brockton-Taunton Gas ..	17	.90	5.3	1.18De	D8	43	14.4	76	41
70	S Brooklyn Union Gas	45	2.20	4.9	2.92De	4	13	15.4	68	42
4	O Cascade Nat. Gas	5	—	—	Def.De	—	—	—	—	18
39	O Central Elec. & Gas	19	1.00	5.3	1.65Ma	13	15	11.5	61	18
13	O Cent. Indiana Gas	15	.80	5.3	1.10Ma	4	7	13.6	73	67
5	O Chattanooga Gas	54	.30	5.5	.55F	44	14	10.0	55	46
66	O Gas Service	28	1.36	4.9	2.47Ma	47	7	11.3	55	35
8	O Hartford Gas	39	2.00	5.1	1.89De	D37	0	20.6	106	37
3	O Haverhill Gas	21	1.32	6.3	1.90Ap	D7	20	11.1	69	58
18	O Indiana Gas & Water ...	21	1.00(b)	4.8	1.54Ap	2	11	13.6	65	47
48	S Laclede Gas	19	.90	4.7	1.37Ma	23	7	13.9	66	33
5	O Michigan Gas Util.	19	1.05	5.5	1.36Ap	1	18	14.0	77	34
5	O Midsouth Gas	13	.57	4.4	.65Ap	4	6	20.0	88	39
43	O Minneapolis Gas	28	1.45	5.2	1.94Ma	D6	12	14.4	75	42
15	O Miss. Valley Gas	22	1.20	5.5	2.20Ma	76	14	10.0	55	33
5	O Mobile Gas Service	22	1.10	5.0	1.84Ma	80	0	12.0	60	35
7	O New Haven Gas	34	1.80	5.3	2.36De	4	0	14.4	76	68
13	O New Jersey Nat. Gas ...	34	1.60	4.7	2.69Ma	14	—	12.6	52	35
80	O No. Illinois Gas	22	.88	4.0	1.42Ap	5	—	15.5	62	54
9	O North Penn Gas	11	.60	5.5	.78De	D23	8	14.1	77	58
16	O Northwest Nat. Gas	16	.72	4.5	1.06Ma*	D18	4	15.1	68	39
240	S Pacific Lighting	47	2.40	5.1	2.67Ma	5	0	17.6	90	35
22	O Pioneer Nat. Gas	28	1.40	5.0	2.13De	5	13	13.1	66	36
2	O Portland Gas Lt.	11	.50	4.5	1.50Ma	127	0	7.3	33	25
9	A Providence Gas	10	.56	5.6	.56De	D10	13	17.9	100	50
3	A Rio Grande Valley Gas ...	3	.15	5.0	.24De	D14	8	12.5	63	52
5	O So. Atlantic Gas	14	.80	5.7	.96Se	D9	5	14.6	83	34
12	O So. Jersey Gas	32	1.50(b)	4.7	2.18Ma	14	24	14.7	69	47
29	S United Gas Impr.	43	2.20	5.1	2.47De	1	5	17.4	81	64
51	S Wash. Gas Light	43	2.00	4.7	3.05Ma	D3	2	14.1	66	41
11	O Wash. Nat. Gas	13	(g)	—	.45Ma	30	—	—	—	41
8	O Western Ky. Gas	12	.60	5.0	.88De	D10	4	13.6	68	38
Averages				5.1%				13.9	72%	



RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER STOCKS

Annual Rev. (Mill.)	(Continued)	6/25/58 Price About	Dividend Rate	Approx. Yield	Recent Share Earnings	% Increase	Aver. Incr. In Sh. Earnings 1952-57	Price-Earn. Ratio	Div. Pay-out	Approx. Common Stock Equity
<i>Communications Companies</i>										
<i>Bell System</i>										
\$6,313	S Amer. T. & T. (Cons.) ..	177	\$9.00	5.1%	\$13.00F*	D1%	3%	13.6	69%	64%
303	A Bell Tel. of Canada	43	2.00	4.7	2.00De	D11	0	21.5	100	66
46	O Cin. & Sub. Bell Tel. ...	86	4.50	5.2	4.93De	D12	1	17.4	91	100
232	A Mountain Sts. T. & T. ...	125	6.60	5.3	8.32De	D8	3	15.0	79	73
324	A New England T. & T. ...	138	8.00	5.8	8.16Ma	D2	2	16.9	98	55
864	S Pacific T. & T.	132	7.00	5.3	7.50F	D14	1	17.6	93	59
108	O So. New Eng. Tel.	38	2.00	5.3	1.90De	D13	—	20.0	105	64
Averages				5.2%				17.4	91%	

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Annual Rev. (Mil.)		(Continued)	6/25/58 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	% In- crease	Aver. Inc. In Sh. Earnings 1952-57	Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity
Independents											
5	O	Anglo-Canadian Tel.	30	\$1.20	4.0%	\$3.23Ma	1%	56%	9.3	37%	55%
41	O	British Col. Tel.	43	2.00	4.7	2.45Ma	D14	5	17.6	82	31
4	O	Calif. Inter. Tel.	14	.70	5.0	.78Ma	D10	—	17.9	90	24
18	O	Calif. Water & Tel.	22	1.20	5.5	1.32De	D13	—	16.7	91	48
18	O	Central Telephone	23	1.00(b)	4.3	1.99De	—	10	11.6	50	28
5	O	Commonwealth Tel.	17	.90	5.3	1.44De	23	—	11.8	63	37
4	O	Florida Telephone	24	.90	3.7	1.07De	24	1	22.4	84	46
289	S	General Telephone	50	2.00	4.0	3.01Ma	NC	32	16.6	66	34
16	O	Hawaiian Telephone	17	1.00	5.9	1.14My*	D12	7	14.9	88	38
7	O	Inter-Mountain Tel.	15	.80	5.3	.94De	17	2	16.0	85	63
21	O	Rochester Tel.	21	1.00	4.8	1.23Ma	D21	0	17.1	81	39
4	O	Southeastern Tel.	20	.90	4.5	1.11De	D21	—	18.0	81	54
10	O	Southwestern St. Tel. ...	23	1.20	5.2	1.66De	5	4	13.9	72	35
10	O	Tel. Service of Ohio	120	1.40(b)	1.2	7.94Ma	10	NA	15.1	18	NA
34	O	United Utilities	24	1.25	5.2	1.54De	D6	1	15.6	81	40
15	O	West Coast Tel.	20	1.00	5.0	1.36Ma	D1	4	14.7	74	35
260	S	Western Union Tel.	20	1.20	6.0	2.03De	D8	—	9.9	59	85
Averages					4.7%				15.2	69%	
Transit Companies											
21	O	Baltimore Transit	6½	—	—	\$1.01De	124%	—	6.4	—	41%
12	O	Cincinnati Transit	5	\$.30	6.0%	.52De	9	0%	9.6	58	49
65	S	Fifth Ave. Coach	18	2.50(c)	13.9(c)	2.46De	D29	0	7.3	102	68
308	S	Greyhound Corp.	16	1.00	6.3	1.22De	D4	0	13.1	82	45
25	S	Nat. City Lines	23	2.00	8.7	2.74De	12	9	8.4	73	94
13	O	Niagara Frontier Trans. .	8	.60	7.5	.77De	35	0	10.4	78	78
65	O	Phila. Trans.	6	.60	10.0	1.23De	D25	—	4.9	49	38
17	A	Pittsburgh Rys.	6½	.25	3.8	Deficit	—	—	—	—	90
6	O	Rochester Transit	5	.40	8.0	.64De	D6	29	7.8	63	100
22	O	St. Louis P. S.	10	1.00	10.0	.57De	D17	19	17.5	175	94
15	S	Twin City R. T.	13	1.50	11.5	1.01De	D16	D	12.9	149	53
21	O	United Transit	5	.60	12.0	.87Ma	D1	11	5.7	69	51
Averages					8.9%				9.5	89%	
Water Companies											
Holding Companies											
43	S	American Water Works .	14	\$.60	4.3%	\$.95Ma	D3%	5%	14.7	63%	17%
Operating Companies											
5	O	Bridgeport Hydraulic ...	32	\$1.70(f)	5.3%	\$2.05De	D2%	5%	15.6	83%	53%
15	O	Calif. Water Service ...	45	2.40	5.3	3.20Ap	1	6	14.1	75	33
4	O	Elizabethtown Water ...	42	2.00	4.8	3.90De	19	30	10.7	51	58
11	S	Hackensack Water	45	2.00	4.4	3.18De	11	6	14.2	63	38
8	O	Indianapolis Water	23	1.00	4.3	1.26De	D11	0	18.3	79	35
6	O	Jamaica Water	36	2.00	5.6	2.96(a) Ma	3	0	12.2	68	26
5	O	New Haven Water	64	3.40	5.3	2.30De	D20	0	27.8	148	61
2	O	Ohio Water Service	29	1.50(b)	5.2	2.32Ma	D1	10	12.5	65	32
8	O	Phila. & Sub. Water	35	.50(b)	1.4	3.00Ma	D3	7	11.7	17	28
2	O	Plainfield Union Wtr. ..	61	3.00	4.9	4.42De	D12	2	13.8	68	63
4	O	San Jose Water	49	2.80(f)	5.7	3.41My	D5	9	14.4	82	42
10	O	Scranton-Springbrook ...	21	1.00	4.8	1.68Ma	22	7	12.5	60	29
5	O	South. Calif. Water	17	.80	4.7	1.17Ma	D2	12	14.5	68	31
4	O	W. Va. Water Service ..	21	.68(d)	3.2	1.75Ma	5	9	12.0	39	17
Averages					4.6%				14.6	69%	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. NC—Not comparable. NA—Not available. D—Decrease. *On average shares. (a)—Adjusted to eliminate 15 cents per share of nonrecurring tax savings. (b)—Also stock dividend in 1957. (c)—Company took no action on dividend payable for the first quarter of 1958, but declared 50 cents applicable for year 1957, as a year-end extra. (d)—Also 1 per cent stock dividend quarterly. (e)—Also 10 per cent stock dividend May 19, 1958. (f)—Includes extras. (g)—Also 4 per cent stock dividend June 6, 1958.



What Others Think

FPC Rules on Accounting Treatment of Deferred Taxes

THE Federal Power Commission on May 29, 1958, issued two accounting orders prescribing "normalization" of taxes, one for natural gas companies under Docket No. R-158, and the other one for public utilities and licensees under Docket No. R-159. These orders are partly the outcome of the Amere Gas Utilities Company's hearings and were the subject of considerable argument and discussion both with the industry and during the oral arguments held before the commission on September 17, 1957.¹

In the amendments of rule making, the Federal Power Commission had proposed the setup of two income accounts, 507-A and 507-B, and a new balance sheet account 259.2, called "Reserve for Deferred Taxes on Income — Liberalized Depreciation."

From the record of the oral arguments before the commission, as well as the 62 responses received from interested parties in both dockets, it would appear that far-reaching and irreconcilable differences of opinion existed between the proponents of the tax reserve method as

opposed to the restricted surplus method, not to mention those who were against any type of "normalization" at all. This situation may well have prompted the commission to set up a new account No. 266, called "Accumulated Deferred Taxes on Income." By setting up this deferred credit, while espousing a method which had the least backing in either electric or gas utilities, the commission probably felt that it got away from the most controversial features of the whole problem of normalization of taxes.

THE real importance of "normalization" will lie primarily in the rate-making treatment of the tax deferral, and in this connection there are certain rate-making implications in the commission's order, which said in part:

On consideration of the various aspects of this problem, we conclude that the congressional purposes which led to the enactment of § 167 of the Tax Code and the purposes of commission regulation of accounts can reasonably be achieved by employing the procedures contemplated in the proposed amendments described above, but providing a balance sheet treatment that neither

¹ EDITOR'S NOTE: For a discussion of the financial aspects of this decision compared with state regulatory practice, see article beginning page 104, this issue.

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identifies the accumulated amounts as a reserve or as restricted surplus.

The above reference to congressional intent says in part:

More liberal depreciation allowances are anticipated to have far-reaching economic effects. . . . *For all segments of the American economy*, liberalized depreciation policies should assist modernization and expansion of industrial capacity, with resulting economic growth, increased production, and a higher standard of living. (Italics supplied.)

IT is clear from the above statement that the intent of Congress can only be carried out for regulated industry by proper rate making wherein not only normal taxes are allowed, but where the deferred credit is also included as part of the capitalization. It is believed to be of some significance that both the gas and electric orders tie in the accelerated amortization closely with liberalized depreciation (subaccounts 266.1 and 266.2, respectively). It is well known of course that the commission had ruled affirmatively in the Panhandle case, and had been sustained by the U. S. circuit court of appeals for the District of Columbia circuit, decided on December 15, 1955 (11 PUR3d 113). In that proceeding the court noted that the deduction of the accumulated tax deferral from the rate base would be contrary to congressional intent. It is difficult to see how the commission, in view of its current reference to congressional intent with respect to § 167, could act any differently from the rate-making position it had taken in the Panhandle case.

Again the commission seemed to be on the verge of making its ruling apply to the rate-making process when, referring to the nature and purpose of accumulated

tax deferrals, it said in part: "*It will meet the intent of Congress that the funds generated from the effect of accelerated amortization and liberalized depreciation be available to the utilities for plant expansion.*" (Italics supplied.)

WITH respect to the issuance of securities, the commission made this statement when it said that its treatment of the tax deferral ". . . will not foreclose financial analysts, investors, and others from considering these amounts as part of equity capital, *if they think proper*, with such consequential benefits to the rating of the company's securities and costs of financing as may result therefrom." (Italics supplied.)

This seeming liberality of the commission as to the treatment of account No. 266 may be taken to some extent with a grain of salt, since it will be the commission's action when it has to pass on the issuance of securities of companies subject to its jurisdiction that will in the final analysis be the controlling factor and not the opinion or calculations of the financial analysts.

In this connection it is of interest to speculate as to the effect which the commission's order will have on securities already issued. The commission order requires that the amendments be effective as of January 1, 1958, and the question might well be asked as to whether the balances of the tax deferrals as of December 31, 1957, which with some companies are in restricted surplus and with others in tax reserve, are to be transferred to account No. 266. The effect of this will be particularly important to companies which have used the restricted surplus method and whose capitalization ratios are based on the inclusion of this restricted surplus in total equity. An adverse effect on securities issued in good faith under other

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and more favorable conditions might well be the end result of such an order.

A case presumably could be made for freezing the balances in the old accounts as of December 31, 1957, and to start accumulating the new deferrals in account No. 266 as of January 1, 1958. However, the commission's record with respect to retroactive accounting adjustments is not impressive.

Another question which remains unanswered is the treatment of utilities which while subject to FPC jurisdiction either have no state commissions or have the home-rule type of regulation, such as is found in Texas.

ANOTHER point of interest is the Federal Power Commission's statement with respect to vintage accounting. It would appear that the commission had to retreat somewhat from its earlier position, which would have required the physical identification of property in order to establish the year of construction and the year of retirement to where the order now says in part: "To this end, we have indicated by revision in the text of this subaccount that, where necessary, the underlying calculations to segregate and associate deferred tax amounts and subsequent 'reverse deferrals' with the respective vintage years may be based on reasonable methods of approximation, consistently applied." It is clear, however, the commission will be the final judge and the burden of proof apparently will be on the utility to show that the original record-keeping requirements will produce an undue cost burden to the utility.

THE commission's discussion of the relative advantages and disadvantages of the reserve method as compared to the restricted surplus method is noteworthy. The commission's order said in part:

However, the reserve treatment necessarily emphasizes a liability concept, although the accumulated tax deferrals cannot be said to represent an actual indebtedness. Even though tax deferrals have certain aspects as a long-term debt, their evaluation as an existing liability cannot be fully justified considering the long-term and noninterest-bearing features. (*Italics supplied.*)

THE question that can be posed here is: Is the tax reserve any different from the depreciation reserve? The depreciation reserve which is set up for the eventual replacement of property has both long-term liability features about it, since property is long-lived, and is also not interest bearing.

Since a utility will eventually have to repay the government for the taxes temporarily deferred (since no taxes are ever forgiven), then a liability must obviously exist. To deny that there is a liability might be interpreted to mean that there is no deferral, and that taxes are permanently reduced. Such a position could lead back to the use of actual taxes and the defeat of congressional intent. There appears to be an element of contradiction in the commission's order when it goes on to say: "On the other hand, it is evident that classification of tax deferrals as surplus, even though restricted, tends to disregard their essential character as provisions from income committed to the single purpose of providing for future taxes." (*Italics supplied.*)

It would seem that the underscored portion of the above excerpt would indicate a future liability, and consequently the need for reserve accounting. In turn there would appear to be an implied contradiction to the earlier position that the deferral does not require reserve accounting.

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WHILE licensees, public utilities and natural gas companies which are subject to the Federal Power Commission, would report the deferral in account No. 266, there is nothing in the order to indicate how companies that are entirely intrastate in character, and are not licensees, should report to the commission on Form 1. The question that arises here is whether such companies would report the way they have to date—namely, in a variety of ways—and whether the commission then would make the necessary adjustment to the accounts to conform to its order. It would seem that considerable confusion could arise between the Federal Power Commission's published figures and those which the companies report in accordance with their state orders, or in the way the tax account deferrals are shown in their annual reports.

COMMISSIONER Connole's principal concern appears to be that, because of the growth of property, there will never be a net reduction in the balance sheet account No. 266. There is no question that as long as § 167 is in effect and is being used by the industry which is characterized by rapid growth, account No. 266 will obviously increase. That does not mean, of course, that as individual pieces of property become depreciated to a point where taxes under the accelerated methods become greater than under straight-line depreciation, that charges will not be made to account No. 266 and corresponding credit to account No. 507-B in income. A case seemingly is being made by the opponents of liberalized depreciation that no charges will ever be made to account No. 266.

A parallel situation is, of course, the depreciation reserve, which, as the industry has grown, has increased every year, and nobody has suggested that as

long as that condition exists, that reserve will decrease. However, it is equally clear that substantial charges have been made to the reserve as individual pieces of property have been retired. However, because the additions were bigger than the retirements, as they obviously must be, the reserve has grown and seemingly nobody has found fault with that fact.

Commissioner Connole also seems to object to the need to account for the so-called "nonexistent dollars" when he said in part:

Accordingly, there is no occasion, in my opinion, for the commission ever to be confronted with the problem of to what accounts should an amount of dollars be debited and credited. These dollars should never appear anywhere above the line in a utilities income statement as legitimate and reasonable operating revenue deductions, they should never be charged against ratepayers in any form and, hence, ought not to be recovered in the form of operating utility revenues.

AN answer to this contention has been suggested in an article by C. P. Guercken in the PUBLIC UTILITIES FORTNIGHTLY of August 2, 1956,¹ which in dealing with the same subject said in part: "With respect to . . . the so-called cost-of-service concept wherein actual costs, taxes, and other items are to be used, come what may, the regulatory posture, whether it be the FPC or certain state commissions, can hardly be sustained under close scrutiny. Costs have been adjusted or normalized downward and revenues have even been created by imputing higher rates of return to customers who allegedly did not pay the average rate of return earned

¹"Economic and Regulatory Aspects of Accelerated Depreciation," by C. P. Guercken, p. 145.

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by all customers. In the case of Panhandle Eastern proceedings, in Opinion 269, the staff of the FPC adjusted both the tax depreciation rate and the book depreciation rate downwards, the result of which was, of course, to reduce the cost of service and, hence, of the rates to be paid to Panhandle. It is a little difficult to see how that position can be reconciled with the arguments made by the staff of the Federal Power Commission in the Amere Gas proceedings. All of the foregoing are merely devious exercises in the art of regulatory bookkeeping, and consequently there is little, if any, sanctity to the commission's claim in the use of 'actual costs.'

"The previously mentioned case of In-

diana Bell Telephone Company, the Diamond State Telephone case, and the Southwestern Bell Telephone Co. v. Houston (all recent cases) in which the regulatory authorities by the simple process of imputing higher debt ratios than actually existed, presumed a reduction in taxes below the amounts paid, are interesting collateral studies in the so-called 'pragmatic adjustments' in the discretion of a commission's rate-making powers. Additionally, the question could well be asked as to when tax regulations applicable to all taxpayers became an instrument of control in the accounting and rate-making procedure of public utilities."

—JOSIAH ADAMS

The Utility Advertising Enigma

THE vexing problem of accounting for the costs of utility advertising relating to the public ownership of electric power facilities has recently been the subject of much debate in the nation's press. Editorially, the press has frequently assailed rulings both by state regulatory commissions and the Internal Revenue Service holding that such costs may not be charged to operating expenses or, in the case of the Internal Revenue Service, may not be deducted as a business expense for income tax purposes.

An interesting recent statement on the subject from a state regulatory commissioner comes from Arthur L. Padrutt, who explained the attitude of the Wisconsin Public Service Commission, in an address before the accounting section of the Wisconsin Utilities Association. Padrutt's remarks were in reference to unfavorable editorial comment regarding a Wisconsin commission order. This order says in effect that advertising costs incurred in connection with the public *versus* private ownership controversy must be charged

to the owners of the company and not the consumers.

One of the significant differences between the advertising of utilities and that of other industries, Padrutt pointed out, is that the utility customer who is offended by an ad "cannot express his displeasure by getting his electricity from another source. When this customer realizes that he not only must bear this irritation without the relief he normally would have—*i.e.*, buying from the competitor—but that he is contributing to the cost of the offensive material in his rates, his pressure gauge rises rapidly. You may not have made an enemy, but you will have surely failed to gain a friend. Thus, the purpose of the good will or institutional advertising will not have been gained."

THE Wisconsin commission's controversial order, Padrutt explained, does not affect the institutional advertising practices of the utility industry except that portion of it which relates to the economic issue of private *versus* public pow-

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er. Even in this limited field, he said, the order does not prohibit such advertising or restrict management in any way, but simply requires that the owners of the utility pay the cost of such ads. Padrutt defended the order as an interpretation of the "just and reasonable" provision of the system of accounts. The U. S. Supreme Court, he noted, has held that the just and reasonable requirement is to prevent the padding of the accounts by charges knowingly and willingly entered in excess of what is just and reasonable and that there is nothing arbitrary in establishing a standard of behavior so consistent with good morals. Padrutt commented:

A utility may assert that in advertising against public ownership it has not been padding its accounts and its behavior has been consistent with good morals. . . . But, bear in mind that the commission's order did not say such expenses were not just and reasonable. It said they "are not just and reasonable for inclusion in operating expenses of utilities." Sometimes one can believe so strongly in the soundness of his position and of the public good that could be accomplished thereby that he forgets there are two sides of the coin. And, if expenses in furthering one point of view are just and reasonable operating expenses, then similar expenses in promoting the opposite viewpoint may be equally just and reasonable.

To emphasize his point, Padrutt cited a hypothetical case in which an advocate of public power gains control of the management and policies of a private utility and proceeds to cause the company to spend money for advertising on behalf of a state-owned power pool. "Would you agree," asked Padrutt, "that these ex-

penses should not be included in operating expenses? And, would you agree further that the captive customers of the utility should not be required to pay the expenses in rates for service?" This is all the Wisconsin commission's order implies, said Padrutt. He stated:

In granting utilities the privileges they enjoy, the legislature imposed certain duties as well. Namely, adequate service at reasonable rates. You will not find among those listed duties any requirement to influence public opinion on what in the final analysis are legislative matters. Especially so when it is at the expense of the customers of those seeking to influence that opinion. My legislative experience suggests that most legislators would take a very dim view indeed of such a practice. After all, some responsibility must be assumed by the owners above and beyond the usual concept of their duties.

In issuing this order, we attempted to make it clear, and I wish to emphasize the point here, that the commission took no position "with respect to public ownership of power resources or attempting in any way to influence the opinion of any person in regard to this matter or to restrict the right of any person to express and to publicize his opinion." . . . But, we can find no justification for customers being required to pay, in addition to the cost of service, the expense of publicizing a particular economic viewpoint. Such activity is not a part of utility operations.

PADRUTT does not deny that utilities have the right to defend themselves from competition and from the encroachment of public power on the free enterprise system. On the contrary, he maintains that the utilities not only have the

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right but the duty to defend that system. But a few ads attacking the concept of public power, the costs of which are passed along to the customers, do not, in his view, discharge that duty. "It is the avoidance of the duty rather than the exercise of the right," he declared.

The protection private utilities seek, he explained, is best obtained by providing the best possible service at the lowest rate consistent with a return necessary to maintain the financial health of the company. Another method to discharge the duty to defend the private enterprise system is to advertise and publicize that service. He noted that the Electric Companies' Advertising Program (ECAP) covers a

considerably broader field than merely the public *versus* private ownership question, some of the ads emphasizing the value of electric service through stressing or dramatizing the excellence of service, the variety of services, and the low cost of service.

The accounting for this class of ad and other institutional or good-will types is not affected by the Wisconsin commission order, Padruitt stated, and the cost of such advertising will continue to be included in operating expenses. "It will be necessary, of course, in connection with joint ads—*i.e.*, where the public *versus* private power question is combined with other subject matter—to divide the total cost between

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the amount includable in operations and the amount chargeable below the line," he explained.

HE suggests that it would be well to charge enough of such joint advertising expense below the line so that it is certain that operating expenses include no items relating to the public *versus* private power controversy. "I think, too, it would be good public relations to publicize the fact that any such expenses are charged below the line," he said. "By so doing you will have spiked a great deal of opposition that may arise against your engaging in such advertising."

"Thus, a series of ads of the good-will-good-service type followed by one summarizing the others and commenting on

the public power issue with that one clearly marked 'This ad paid for by the owners' would be in accord with the intent and purpose of the order. Such a campaign would be most effective and would give no grounds for complaint by even the most ardent advocate of public power."

Padrutt concluded his address by suggesting that the unfavorable editorial comment which greeted the commission's order may have been motivated more by a fear of losing advertising revenue rather than alleged infringement of free speech. He assured his audience of the Wisconsin commission's strong belief in the free enterprise system and its desire to discharge its regulatory duty, as it sees it, without fear or favor, in the public interest.

—F. M.

Power Executives Stress Better Relations

"FULL use of modern management tools" is essential if the electric industry is to continue to compete favorably in the money market and reach new levels of operational efficiency, according to S. L. Drumm, executive vice president of the West Penn Power Company.

In an address to the recent convention of the Edison Electric Institute at Boston, June 9th to 11th, Drumm said:

In the next decade we must add the equivalent of the electric facilities that have been building for three-quarters of a century; in the decade beyond that, we face the prospect of adding facilities approximately twice those we now have, bringing our electrical size to about four times that of the present.

To meet this challenge, Drumm said, companies must have the right kind of top organization structure, they must make decisions on decentralization on the basis of careful study and with an eye to future

needs, and review the adequacy and comprehensiveness of plans and objectives.

Drumm cited several methods used by utility management to increase efficiency and reduce costs.

Maintaining current daily records of customers' accounts receivable by machine posting at centralized locations allowed one company with over 400,000 accounts to record a saving in 1957 of \$50,000 from 1954 costs, despite salary increases of 12 per cent, he said.

ALARGE metropolitan utility, he noted, applied office - work - measurement techniques and has reduced its office personnel by one-seventh despite a 10 per cent increase in work load.

"Inventory control is another fertile field for savings," he said. "In one company with three years of real inventory control behind it, there has been an adjusted price decrease in inventory value of \$800,000, or 18 per cent, with approxi-

WHAT OTHERS THINK

mately another \$500,000, or one-third, reduction in capitalized stock costs. This represents an annual savings of \$130,000 in carrying charges alone, despite the fact that in 1957 disbursements were \$1.5 million above those of 1954."

Drumm cited the application of automation techniques in the industry as a means of reducing costs. An example, he said, is the use of the electronic computer as a load-dispatching tool. "The first system to install this device states that it saves at least \$400,000 per year," and the most recent system "estimates annual savings that will repay the investment in one and a half years."

Drumm said that carefully prepared standards make substantial savings possible. He noted that one company had done a "magnificent job" in reducing the number of different types of distribution transformers it purchases from 50 to seven, "with obvious savings in investment in transformers as well as in other purchasing, warehousing, and clerical costs."

"Another means of cost reduction comes from objective study of the best number of districts and divisions, the best boundary lines for them, and the best location of service centers and regional headquarters," Mr. Drumm pointed out. "One company, as a result of thorough study, combined three former districts into one, built a modern, centrally located district service center, and saved over \$100,000 a year."

In the marketing field, Drumm said, "better methods may involve cost increase and frequently do—but certainly they involve better results for money spent."

STATING that "in the residential sales field greater progress is now being made than ever before in co-ordinated selling by all branches of our industry," Mr. Drumm went on to say that "many of us haven't yet taken advantage of the benefits of pulling together and of using

plans, programs, and materials carefully developed and packaged for our use and available at much lower cost than any partial substitutes we could contrive for ourselves."

Among these "packages," he cited the EEI-NEMA co-ordinated calendar, the Housepower program, the Medallion Homes program, and the programs of the Better Light Better Sight Bureau.

Mr. Drumm said that training company personnel in the basic ideas of cost reduction is an important means of improving efficiency. One electric company estimates that for each dollar spent on such training, it saves \$2.58, he said. Another company "estimates that its saving was as high as \$1 million in one year."

"The crux of the matter," Drumm said, "is that we should be fully aware of the importance of operations improvement and of increasing our efficiency and that its accomplishment should be recognized by management as one of our greatest opportunities and one of our greatest challenges."

CHARLES E. OAKES, chairman of the board of the Pennsylvania Power & Light Company, told the utility executives that a broad employee information program designed to stimulate interest and educate employees in the "economics of the American way" and of the electric industry is "an absolute necessity."

Oakes pointed out that "for years, there has been a tendency to proceed on the theory that widespread and complete understanding of the working of the American system was, perhaps, not wholly essential for the mass of our people. Now, we fully realize that this is not so."

"The electric utility industry has an obligation to inform first its employees and then the public itself," he said.

"We have, in our industry for many

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years," Mr. Oakes said, "been in the first line of attack by those who would like to remold the structure of American society. While we have been sensitive to their motives, we have been somewhat less than completely successful in translating their objectives effectively to the public mind."

"In this struggle," he continued, "we are faced primarily with the most dynamic, most powerful, and important things in the world—ideas. And what kind of a nation we become depends greatly on people—and on their economic beliefs and attitudes."

Oakes said that the basic concept of an employee information program should be "to fortify the employee with information so that he will be first a more efficient company employee. In turn, he becomes an ambassador of good will for the company and a reliable source of information to his neighbors, his friends, and to the general public on fundamental economic principles of the American enterprise system."

THE program Oakes described would last two and a half years and consist of monthly discussion groups led by trained instructors. It would begin by giving employees "the essentials of the American economic system," and then be expanded to cover the public utility business in general and the employee's company in particular.

Oakes cited a program being offered by the Edison Electric Institute to member companies titled the "American Economic System." The six-hour employee information course is based on a 96-page illustrated book and includes filmstrips, a kit of demonstration materials, and a manual to aid conference leaders in putting on the program.

"Finally," Oakes said, "a well-rounded employee program should include a thorough discussion of the relations of gov-

ernment to our business." He said this could be introduced by an elementary discussion of American freedom, including the history of freedom, the guaranties afforded by our Constitution, and the methods which must be pursued by our citizens to keep our freedoms from being invaded by delegated authority.

Oakes emphasized that the effectiveness of the program would need to be constantly checked by testing the employee's grasp of subject matter introduced.

Developing such a program, he said, "is neither simple nor easy. It calls for contributions from our best and most thoughtful minds. It will take time, money, widespread effort, and expository talents of a high order." "This work," he added, "should be given status at the vice presidential level."

Several electric utility companies have already adopted similar information programs, Oakes said. "Experience in these instances shows that where their employees have become thoroughly informed they have a higher record of discussions of company and industry problems with other people."

"The employee is the key to a properly informed public," Oakes said. "It is our duty as executives and supervisors in this industry to assemble and present the necessary facts, to see that every employee is completely informed and to instruct him in the manner and ways of transmitting these facts to the public."

"BETTER selling is a must" for the electric power industry if the record addition of generating capacity in 1958 is to be put to work most profitably, said C. A. Tatum, Jr., president and general manager of the Dallas Power & Light Company.

"This year," the Texas utility president noted, "about 16 million kilowatts of new

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capacity will be put in service. This is the greatest capacity increase ever added in one year." The electric companies, with a major proportion of the new additions, have budgeted some \$4 billion, which must be put to work, he said. "To do it, we face a marketing job—for which better selling is a must."

Tatum emphasized that "finding and creating new markets" are important management functions. The electric industry is in a unique position, he said. "Any of us here today could pick any of those low-saturation appliances and merely by deciding to do it, could start the planning and programming that would double or even triple the sale and use of that appliance in our territories."

"We have two broad avenues open to us," Tatum said. "The industrial-commercial market, and the residential field. And they are wide-open expressways to greater sales and profits."

In the industrial-commercial market "the one thing, more than all else, which will help our customers use more power is automation—or electrical modernization of plants," he said. "We should fully organize our own people who know something about automation, and send them into the plants on our systems with an aggressive program for modernization."

THE residential field, he pointed out, "is most productive of net utility revenue" and "is less susceptible to economic readjustments."

"Development of this market in the future is a job that we must do to a greater extent ourselves," he noted. "Appliance manufacturers are being caught in a cost-price squeeze which leaves them with a profit of around 2 per cent on sales. Con-

sequently, they point out, any additional spectacular promotional surge at this time must come from elsewhere."

"What we need, in my opinion, to speed our progress in the right direction down this inviting road, is a great, inspired, and sustained selling effort for the industry. A dynamic program of market expansion. The greatest display of selling enthusiasm ever seen by our organizations and our industry."

"There are no shortages of anything we need to do this job. There is an abundance of appliances, and plenty of materials for building. Consumers have plenty of money in the bank," he said. "Survey after survey shows that consumer acceptance of electric appliances is at an all-time high. Customers want more electric kitchens, air conditioning, washers, dryers, and every other appliance."

TATUM called for a "long-range program of selective selling" with "sales goals set much higher than ever before." The program, he said, ought to be one good for a five-year effort regardless of the shifting business climate.

"Let's be prepared to invest a lot more dollars in sales and advertising," he said. "We once invested a dollar to get a dollar of new revenue. Today we spend about 30 cents, which buys about half what 30 cents formerly did."

"Roughly 1.6 per cent of our gross now goes into promotion. This figure should be reviewed and revised," Mr. Tatum said. "We need to recognize this as an investment in our future."

He urged that sales forces be increased and improved and "that they do a better selling job in areas where we need it most right now."

PUBLIC UTILITIES FORTNIGHTLY

Utility Community Service Programs

MANY utility companies have sought to win the good will and influence of their future customers—those now in high school, who may in a few years be buyers of electricity or gas. Some of the programs adopted for this purpose have been described in PUBLIC UTILITIES FORTNIGHTLY. A somewhat different twist along this line of community service has been carried out by the Florida Power & Light Company of Miami, which sponsored and published a Florida history book for use in junior high schools. It has been used during the recent school year with great success.

Educators have long deplored the fact that not enough history is being taught in high schools. A Florida State University history professor recently lamented the fact that the younger generation no longer has "a feeling for history." This has been true in Florida as elsewhere, even though Florida has the longest history of any of the 48 states.

With the thought in mind that Florida's teen-age generation should be made aware of Florida's interesting and unique historical background, the Florida Power & Light Company obtained the co-operation of Miami educators in the preparation of a 164-page, hard-bound book, titled "*South Florida Frontiers*," which, though it stresses south Florida, gives the history of the entire state from the landing of Ponce de Leon at St. Augustine in 1513 to the modern age, outlining the area's history, geography, climate, industry, and potential in an easy-to-read, well-illustrated style.

DR. WILLIAM M. ALEXANDER of the University of Miami's department of education, a nationally recognized curriculum planning expert, supervised the content and format. Top educators in the

Dade county school system worked with him. Mrs. Mary Ellen Smith, a writer for magazines, newspapers, radio, and television, was selected to do research and compile and edit the material, a job that required two years. "It is believed," says Florida Power & Light, "that this is the first time a book of this kind had been devoted exclusively to south Florida."

Dr. Alexander was one of those who pointed out the need for such a book in the Dade county high school curriculum. "Each year," he said, "thousands of children come to Florida and many are here now who received elementary education elsewhere." They come to Florida, he said, with little or no knowledge of the state's history.

The power company distributed about 10,000 copies of the book to social studies teachers in every public, private, and parochial high school in Dade county.

That the history book has filled a real need is indicated by the comment of Wesley W. Matthews, assistant superintendent for general education in Dade county, who said: "'*South Florida Frontiers*' has all the characteristics of a good textbook plus readability, and it shows no evidence of a self-interest business motivation."

To this Dr. William M. Alexander adds: "I recently read in a national publication that millions of dollars have been spent by business and industry to develop teaching aids in the past few years, and many of them have never been used because they were not correctly prepared in accordance with the needs of the school system."

ENCOURAGED by the welcome that its history textbook received, Florida Power & Light has more recently developed two more booklets of an educational nature designed as a community service

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to help high school students and others find the right occupation when their school days are over.

One is a 98-page booklet, titled "Interesting Careers in South Florida," which details the opportunities in such fields as aviation, agriculture, engineering, building construction, writing for newspapers, radio and television, advertising, fashions, merchandising, real estate, tourism, and even more adventurous careers such as snaring fish and training porpoises.

Dr. Alexander, who was also selected as educational consultant in the preparation of this volume, says about it: "Boys and girls who are beginning to investigate vocations as possibilities for the future will find here many different ones to consider."

It was but another step to a third community service program, designed to help school counselors to evaluate job opportunities for students who may or may not go on to college. Called "Dade County Occupational Guidance Index," it was prepared with the help of the commercial department of the power company. These men interviewed more than 120 employers

in all important types of business, asking questions as to the number of job openings each year, whether training past high school is required, duties of the jobs, salaries paid, pay advancement opportunities, vacation policies, insurance programs, other benefits.

SUCH fields of work as clerical, construction and maintenance, factory work, service occupations, sales, technical and semiprofessional jobs were covered in all categories. Two criteria were used to determine job classifications: (1) "The job should generally be one which boys and girls may enter without previous experience and without college training, and (2) the job should be a fairly common one in Dade county; that is, there should be many employment opportunities."

The information was obtained by Florida Power & Light representatives from individual companies, which filled out a questionnaire. From the questionnaires the information was compiled and written into final form.

—C. E. WRIGHT,
Jacksonville, Florida.

Common Sense and the Depression

"WHILE the politicians are teetering uncertainly, trying to decide what, if anything, to do, several important facts seem to stand out: (1) The American people don't panic as easily as some politicians do, (2) our scientists, educators, financial and business men are doing a much better job than some politicians seem to like to believe, and (3) the basis of American life calls for cures to spring from the people themselves rather than from the government. Another important, and comforting, fact is that the bulk of the Congress, unlike the noisy minority, have a good share of common sense and, like the average private citizen, refuse to go to pieces in the face of trouble. They routed the Socialist-minded politicians in the House . . . substituting for a politically popular but irresponsible aid bill one which would do more good and less harm."

—BILL HENRY,
Columnist.



To Refund \$10 Million

UNDER terms of a rate settlement proposal approved by the Federal Power Commission, Natural Gas Pipeline Company, subsidiary of the Peoples Gas Light & Coke Company of Chicago, Illinois, will refund more than \$10 million plus 6 per cent interest, to its wholesale customers in Kansas, Illinois, Indiana, Iowa, and Wisconsin.

This refund is the result of negotiations on levels of rates which had, in effect, been subject to refund since March, 1955, following the so-called Memphis case decision. This ruling cast doubt on the

The March of Events

validity of rates which had been placed in effect under long-established procedures of the FPC by natural gas companies, subject to review by that commission and possible refund.

The Memphis decision also had the effect of causing Natural Gas last December to delay sale of securities, proceeds from which were to pay bank loans. In compliance with the Memphis decision rate increase procedure, Natural has filed the consents of its utility customers as well as the city of Chicago and the states of Wisconsin, Illinois, Iowa, and other interested parties.

Illinois

Electric Rates Upped 7.3 Per Cent

THE nearly two million customers of Commonwealth Edison Company received an average rate increase of 7.3 per cent as a result of a \$26,434,000 revenue boost given the company by the Illinois Commerce Commission. The company will retain only \$11,796,000 of the increase, however, after tax deductions.

In terms of consumer bills, the average residential user of electricity will pay about 44 cents more per month. All classes of users, including commercial

and industrial, are affected by the increase.

The commission's order granted virtually all of the company's request, with minor modifications in the rates proposed. The last rate increase obtained by the company was in 1954 and amounted to 6.5 per cent.

Willis Gale, chairman of Commonwealth Edison, explained that the increase was asked for in July, 1957, so that the company's capital situation would be such to support credit for the sale of securities to finance a \$600 million construction program.

FPC

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THE MARCH OF EVENTS

FPC OK's 185 Million Cubic Foot Gas Project

THE Federal Power Commission has authorized the Peoples Gas Light & Coke Company of Chicago to construct one of the biggest pipeline gas-supply increments for its customers since the building in 1951 of a 1,200-mile pipeline between Texas Gulf coast and the Chicago area.

Chairman of Peoples, Eskil I. Bjork, said it will mean that many Chicago customers, now on a waiting list, can be

supplied with gas for home heating.

The major expansion approved by the FPC is on the 900-mile transmission system of Natural Gas Pipeline Company of America, a subsidiary of Peoples Gas, between Chicago and the Southwest. The project will have a capacity of an additional 185 million cubic feet daily and will go to Chicago and the other regions served in seven states.

Upon completion, Natural Gas will have a total delivery capacity of about 730 million cubic feet per day.

Indiana

Asks Gas Shortage Help

TO relieve its critical gas shortage, Citizens Gas & Coke Utility has sought help from the Federal Power Commission. The company filed an application on June 20th asking FPC to order three pipeline companies, singly or in combination, to supply it with an additional 35 million cubic feet of natural gas daily by not later than November 1st of this year.

Citizens contended it had tried again and again without success to obtain additional natural gas from its present supplier, Panhandle Eastern, in the last three years in order to fill the ever-increasing

demand for house heating resulting from the steady growth of Marion county.

The 35 million cubic feet additional asked by the company is just enough to cover current needs, according to Dean T. Burns, Citizens' general manager, who said studies show that in 1959 and 1960 an additional 15 million cubic feet daily will be required.

Burns said last February 25th industrial customers had to be asked to curtail their gas usage by 25 per cent for forty-eight hours in order to protect residential consumers against lack of gas. Citizens has offered to help build additional pipelines that may be needed.

New Jersey

Hearings on Gas Hike

HEARINGS have been held before the State board of public utility commissioners on an application by Public Service Electric & Gas Company of Newark seeking a general gas rate increase.

The proposed gas rate boosts would bring in about \$15 million in increased revenues for the company, which would

amount, after taxes, to only a little more than \$6 million.

This is the first general increase in basic gas rates Public Service has asked for in more than thirty-seven years, the company testified.

The proposed rate rise is imperative, the company claims, in order to obtain operating revenues sufficient to meet ex-

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penses, taxes, and fixed charges and to provide a more adequate rate of return on the fair value of the gas property.

It is essential, it was pointed out, that

earnings be increased in order to maintain a sound capital structure so that the company can attract a continuing flow of new capital at lowest possible cost.

New Mexico

Navajo Dam Bid OK'd

THE Bureau of Reclamation has awarded a contract to construct the Navajo dam on the San Juan river in north-central New Mexico, according to Secretary of Interior Fred A. Seaton. It will be the third largest dam of the Colorado river storage project.

Cost of the dam will be \$22,822,624

and the contractor will have four and one-half years to complete the job. The Navajo dam, with a volume of 26 million cubic yards of earth and rock materials, will be the second largest of its kind ever to be built by the bureau. Its height of 405 feet will be second only to that of the 450-foot Trinity dam in California which is now under construction by the Reclamation Bureau.

Pennsylvania

Gas Safety Idea

PITTSBURGH may give natural gas company employees the right to condemn unsafe gas appliances. Its safety director, Louis Rosenberg, the gas companies, and other agencies, are working on proposed legislation to combat the hazards of carbon monoxide.

Under the contemplated law, either city or gas company inspectors could "red tag" an unsafe stove, furnace, or the like.

Once tagged, the appliance could not be used until repairs were made or the appliance replaced.

Prosecutions of violators would come under the Pittsburgh city building code.

Where gas company inspectors tagged appliances, they would have to inform the city at once so another inspection could be made by city personnel.

Pittsburgh is hoping to have an unsafe gas ordinance passed before next winter.

Washington

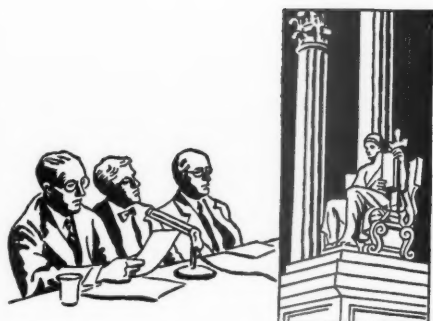
Eminent Domain Decision

BLOCKED by the state of Washington for ten years from erecting two dams that had been authorized by the Federal Power Commission, the city of Tacoma finally was given the right of eminent domain.

The decision was handed down by the U. S. Supreme Court which unanimously voted for the Washington city. The high court's recent ruling reversed the one handed down by the Washington state su-

preme court on February 7, 1957. Justice Charles E. Whittaker, who wrote the opinion for the U. S. Supreme Court, said that the eminent domain power of Tacoma had been finally decided by the ninth U. S. circuit court of appeals in previous litigation.

The city of Tacoma will be able now to proceed with construction of its \$146 million hydroelectric project on the Cowlitz river, about 60 miles from Tacoma between Seattle and Portland, Oregon.



Progress of Regulation

Trends and Topics

Grant of Operating Authority for Project Undertaken without Legal Sanction

A WILLFUL violation of regulatory laws and rules places an applicant for operating authority in an awkward position. Denial of operating authority may be a proper penalty. This is particularly true, as evidenced by commission decisions, in motor carrier cases. On the other hand when a gas or electric company, or a telephone company, extends service and incurs considerable expense, particularly where there is no willful intent to violate rules and regulations, denial of authority may be too extreme a penalty and may be injurious not only to the company but also to persons desiring service and to ratepayers.

Mistake in Undertaking Service

The question of ratification of an unauthorized line constructed into disputed territory came before the Colorado commission after it had found (17 PUR3d 160) that extensions by Public Service Company of Colorado in one area would be unlawful unless made pursuant to specific order of the commission. A company witness assured the commission that a line had been extended without permission only as the result of a mistaken belief, and that such a situation would not arise again. The commission said the instance thus stood alone; it was not a precedent for further accidental breaches of the commission's standing order. It appeared that there would be substantial cost involved in moving the line out of the disputed territory. A rural electric association apparently was not injured to any perceptible extent by extension in this particular case. The commission said that if it required the company to move the line it had mistakenly constructed, some customers must ultimately pay the cost of the moving and under all the circumstances the application for ratification of the extension should be granted (23 PUR3d 198).

The Colorado commission granted a certificate to a small electric utility although it had been operated for some time without commission authority. It was apparent that the owners had never originally intended to become a

PUBLIC UTILITIES FORTNIGHTLY

utility and that status had attached without any conscious action on the part of the owners (PUR1931D 342). A certificate was granted by the West Virginia commission for construction of electric lines by a co-operative although the association had begun construction before applying for a certificate. The commission presumed that the association was acting upon advice of its counsel and the advice of counsel of the federal government that a certificate was not required (24 PUR NS 7). Authority to operate an electric plant, according to the New York commission, should not be denied because the company proceeded to serve without seeking commission approval when the delay in applying for approval was not willful but resulted from a misconception of the company's rights under its franchise (PUR1927A 132).

The Missouri commission granted a certificate for a telephone exchange although there was a technical violation of the law by reason of operation in bona fide ignorance that a certificate was required (PUR1926D 511). In another case the commission said it would not grant authority to do that which had already been done, such as construction and operation of parts of a proposed gas distribution plant, previous to a request for authority. Such error of the company, however, would not be permitted to jeopardize the interest of the people and cities already served (PUR1928E 691).

The same commission granted a certificate for the operation of a transmission line which the company had believed to be included in a prior authorization. The line had been operated for several years. The commission said that it would indulge in the presumption that the applicant did not intend a flagrant disregard of the law (PUR1927C 453).

Action in Other Cases

Permission to construct a gas plant which appeared to be warranted in the interests of the public was granted by the New York commission where refusal would serve no other purpose than disciplining the company which had undertaken the construction of gas lines for the connection of certain patrons desiring service without approval of the commission (PUR1932E 272). The same commission granted authority to construct a steam-heating extension notwithstanding the fact that part of the extension had already been constructed without authority. But the commission denied a certificate for a partly completed electric line to serve buildings owned by a parent company in another company's area (PUR1926B 111).

The New York commission expressed the opinion that a petition by a foreign electric corporation for authority to serve where it had been rendering service illegally, although without objection, should be denied. The company had never been authorized to do business in New York but, with the consent of a New York company disinclined to serve, it had made extensions to a few people (PUR1925D 328).

The California commission, although it had denied operating authority to motor carriers operating in violation of law with full knowledge that the operations were illegal, granted a certificate for the operation of a gas utility which the Pacific Gas and Electric Company acquired from a municipality and

PROGRESS OF REGULATION

operated for an unavoidable interim without commission authorization. There was said to be an indispensable public need for the continuity of service (PUR-1928B 672).

The New Jersey commission approved the continuation of municipal electric utility service in an area outside corporate limits although the municipality had entered the area without obtaining commission approval at a time when a nearby company was either unwilling or unable to serve. Refusal to authorize continued service would result in unjustified interference with the public convenience and necessity of the inhabitants of the area who had been served by the municipality for many years (78 PUR NS 448).

A Pennsylvania court upheld commission authorization granted for a telephone line in territory where the owner had operated for several years without authority. An objector had himself illegally operated for many years and had himself helped to organize a rival line (20 PUR NS 147). The Pennsylvania commission said that protection of an investment made by a gas company doing business without authorization and unlawfully operating as a public service company should not be the controlling end to be furthered by the commission in acting on an application for authority to operate (15 PUR NS 202).

The North Dakota commission denied authority to an electric company to serve industrial customers located in the territory of a co-operative where the co-operative was able and willing to serve them and the company had been ordered in a prior proceeding to cease and desist from such service although it had already built a line to their premises and had begun service (13 PUR3d 243). The Wyoming commission said that issuance of a certificate authorizing an electric co-operative to serve a rural area into which it had illegally extended its transmission and distribution lines would encourage disregard for the law and the rules and regulations of the commission (92 PUR NS 505).

Review of Current Cases

Plant Additions and Rising Costs Do Not Support Bid for Telephone Rate Increase

NORTHWESTERN BELL TELEPHONE COMPANY, engaged in a substantial expansion and improvement program, was unable to persuade the South Dakota commission to grant a rate increase. Pointing to considerable plant additions in 1957 and a rise in labor costs, the company sought additional revenues of \$500,000 a year. It alleged this amount was necessary to produce a return of 5.75-6 per cent which the commission had allowed in its rate or-

der of October 18, 1957, for this company (20 PUR3d 385). No claim of confiscation was made.

Return Not Guaranteed

The commission noted that the fixing of a reasonable rate of return in the 1957 case did not mean that the company is guaranteed any particular rate of return for any particular year. It further indicated that if a utility chooses to under-

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take an unusual construction program in the immediate future, it should not expect to realize its usual rate of return during such period.

The 1956 test year, for the previous rate case, was adjusted for all factors then known to exist that would affect operations in the future. Now, before the adjustments have become fully effective, said the commission, the company seeks a new rate increase although the only change in its status is that a record of operating results for one more year is available.

Inflation Hedge and Plant Additions

In determining rates for the future, the commission has in recent years used a year-end net investment rate base, it was noted, not because it is strictly correct, but because it affords a hedge against inflation. However, for the purpose of determining the particular rate of return realized on actual operations for any particular test period, the commission relates the net earnings for the period with the *average* rate base. Therefore, to test the adequacy of rates already in effect, net earnings must be referred to an average rate base.

For a 1957 rate base, the company included a sum for plant which was not completed until January, 1958. This rate base was rejected since it extended beyond the cutoff date of December 31, 1957, and did not correlate with the revenue produced in 1957. Net plant additions for 1958, the commission indicated, are too speculative to be used as a basis for rate making.

Present Earnings Adequate

The company relied entirely upon intrastate operations in presenting its affirmative case. The commission has jurisdiction over intrastate operations only, and it is primarily concerned with the

company's total earnings in the state.

Using a year-end rate base and making certain expense adjustments, the company calculated its rate of return at 5.24 per cent for 1957. Adding the requested \$500,000 increase in revenues, the rate of return would be increased to 6.01 per cent. The commission rejected this calculation, noting that it included adjustments for expenses becoming effective after the cutoff date. An adjustment for casualty expense was rejected on the ground that it was speculative.

The commission computed the company's total state earnings at 5.87 per cent for 1957 on a year-end rate base, with an average return of the same percentage for a 4-year period including the test year. Using an average rate base, these figures become 6.22 per cent and 6.17 per cent, respectively. A commission witness testified that from 1954 to 1956, inclusive, during which time the present rate schedules were in force, plant additions provided for normal growth and for conversion to dial operation of a number of manual exchanges, and the rate of return remained within a reasonable range.

The commission observed that the company's expansion and improvement program in the present period of high labor costs is actually an abnormal one, involving new buildings, reconverting to accommodate distance toll dialing, switching from pole lines to underground cable, adding many street pay stations, and making various innovations which do not improve local exchange service. The commission said it was not convinced that all of the construction projects contemplated for the near future were so urgent that some of them could not be spread over a longer period of time and thereby keep additions to plant more nearly in line with the increase in revenue-producing units. *Re Northwestern Bell Teleph. Co. F-2510, May 29, 1958.*

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Public Convenience beyond Franchise Area Supports Approval of Site for Generating Plant

THE Connecticut supreme court has upheld a commission decision which approved a site on Manresa Island in Norwalk for a new generating plant to be built by the Connecticut Light & Power Company. The high court found no error in a lower court decision which dismissed an appeal from the commission order. The commission issued its order on appeal from a decision of the Norwalk zoning commission which approved the site, though it was in a residential zone. Property owners claimed that the new facility would depress property values near the island.

Standards Controlling Approval

In this proceeding the commission was guided by a combination of the standards of public convenience and necessity and the standards of public health, safety, and welfare, along with the stabilization of property values. It was required to weigh considerations of public convenience and necessity, which favored the proposed location, against considerations which favored enforcement of the zoning regulations. The court rejected a charge that the commission had been unconstitutionally delegated legislative power without adequate guiding standards, noting that the commission was required to balance the standards usually applied by zoning authorities against those applied in the regulation of public utilities.

Engineering and economic reasons supported the choice of the Manresa Island site. It was not necessary to demonstrate that the site proposed by the company was the only available site or that the facility could be located nowhere else. While suitable alternate sites offer a cogent argument, said the court, the ultimate decision approving one site and rejecting others

must rest upon a finding that the one approved possesses to a reasonable degree advantages over the others and better satisfies the requirements of public convenience and necessity.

Property owners who oppose the utility's choice of a particular site and propose another site instead have the burden of proving the availability and superiority of the alternative location. The function of the court on appeal is merely to ascertain whether the evidence supports the commission's determination.

Franchise Area Requirements

The property owners asserted that the commission's finding of public convenience and necessity requiring the construction of the generating plant was based on proof directed to establishing a need for the whole southwest area of Connecticut, considerably beyond the company's specific franchise area. The question was posed whether the commission could base a finding of the need for additional generating facilities on the requirements of a company serving territories outside its area.

The company has charter authority to contract with other companies to supply power for use in their territories in southwestern Connecticut. This authority, the court indicated, is in a real sense a franchise and, in effect, extends the franchise area of the company. It could be presumed that the commission considered the company's commitments to other companies. The court held that the commission did not abuse its discretion in considering the needs of the entire southwest area in its determination of the public convenience and necessity. *Wilson Point Property Owners Asso. et al. v. Connecticut Light & P. Co. et al.* 140 A2d 874.

Zoning Board Ruling Upset by Commission

THE Connecticut commission revoked a decision of the Greenwich Zoning Board and issued an order authorizing a water company to erect an elevated tank on property it owned.

The protestants claimed that appeals to the commission from the town zoning board were governed by the same principles applicable to appeals from decisions of administrative boards generally, that the commission's review was limited to consideration of whether the local board acted arbitrarily, illegally, or in abuse of its discretion. Generally speaking, said the commission, appeals from administrative agencies are not the subject of de novo hearings and the appellate forum is limited to a review of only the original record and is without jurisdiction to substitute its judgment through the medium of modification, revocation, or substitute orders from that initially issued by the authority first hearing the matter.

However, the local zoning body acts as a special agency of the state subject to appeal to the commission. This is a departure from the normal or more usual limited facilities of a zoning authority concerned only with local ordinances and

restrictions contained therein, pointed out the commission. The legislature had seen fit to protect the public interest by referring the right of review through the medium of a de novo hearing to a regulatory body whose responsibility was not limited to a group or particular section but was designed to assure all residents satisfactory and adequate facilities for supplying them with the vital services of public utilities.

The commission concluded that public interest clearly outweighed any local zoning factor advanced by the protestants. The elevated tank would meet the requirement of improved pressure in the area. Use of the site owned by the company would permit prompt installation at reasonable cost, while acquisition of the alternate site proposed by the protestants would cause long delay. The intrusion on the esthetic senses of area residents was only a matter of degree as between the two sites.

Past experience with an elevated tank in another area of the city had not indicated an untoward adverse effect on realty values. *Re Greenwich Water Co. Docket No. 9548, April 10, 1958.*



Hawaiian Telephone Rates Increased and Extended Area Service Authorized

THE Hawaiian commission granted in substantial measure an application by Hawaiian Telephone Company for an increase in rates for local service. The last increase was authorized for this company in 1953.

A request for authority to eliminate certain toll charges was also granted. The company was permitted to bring specified exchanges into extended area service on their respective islands at prescribed rates.

Return Allowance and Revenues

The rates proposed by the company would have produced a rate of return somewhat in excess of 7 per cent, according to the commission's calculations. While this was considered excessive, an expected return of 5.1 per cent for 1958 under existing rates was, of course, inadequate. A return of 6.5 per cent on an original cost depreciated rate base was allowed as reasonable. It is noteworthy that one

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dissenting commissioner felt that a special allowance of one-quarter per cent should be made to take care of inflation.

In arriving at the permissible rate of return, the commission allowed approximately 10 per cent common stock equity earnings. The commission staff, in calculating the financial requirements of the company, allowed for dividends to be paid on stock proposed to be issued in the middle of the pro forma year of 1958. This calculation was approved along with a staff estimate of revenues from an expected gain in stations. This estimate was based on an average of the gain expected during 1958, 1959, and 1960. It also reflected on a full year basis a substantial number of held upgrade orders which the company expected to satisfy before the end of the year.

The results for the test period should be adjusted, the commission noted, when necessary to reflect earnings based upon a normal rate of growth in revenues, expenses, and plant additions. In addition to the factor of growth, any permanent change in the character of operation, recent or imminent, which can reasonably be expected to continue into the test period should be reflected in the forecasts of operating results.

The company's capitalization ratios were considered reasonable and indicative of present conditions. Debt amounted to 50.2 per cent (bonds 40 per cent and debentures 10.2 per cent), preferred stock 9.4 per cent, and common equity 40.4 per cent. *Re Hawaiian Teleph. Co. Docket No. 1324, Decision and Order No. 946, April 30, 1958.*



Rate Condition and Duration Limitations Denied In Gas Producer Certificates

IN granting certificates under § 7 (c) of the Natural Gas Act, the Federal Power Commission rejected a staff recommendation to impose a rate condition to reduce a proposed rate of about 21 cents per Mcf for gas produced in the Bayou Rambio field in Terrebonne parish Louisiana. The gas will be sold to United Gas Pipe Line Company, which was authorized to construct facilities to receive the gas.

There was no substantial evidence, the commission held, to establish that the producers' proposed price was excessive or that a rate condition was otherwise required by public convenience and necessity. Nor was there substantial evidence to support a finding that the rate condition was reasonable under § 7 (e) of the act. The commission noted that the principal place for the consideration of mat-

ters of rate level is in a rate proceeding, though in a proper case the element of price may be considered in passing on a certificate application.

Commissioner Connable dissented on the rate condition issue. The record, he pointed out, shows only 8 contracts out of 88 in the area at a price of 21 cents, including taxes, and 85 per cent of the contracts are at levels of 18 cents or less. The commissioner asserted that some deterrent must be placed on the upward spiral of producer prices in the area. He thought the public convenience and necessity did not require authorization of sales at the proposed price of 21 cents.

Contract Term Authority Denied

The commission denied requests by certain applicants that the certificates issued to them be of limited duration, expiring

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at the end of a contract term. Their evidence, however, did not substantially support the issuance of certificates of other than unlimited duration. Whether a certificate should be issued under § 7 for limited duration, and if so, the extent of the term, are questions to be determined in the application of the statutory standards of this section, including the requirements of public convenience and necessity,

the commission stated. *Re Superior Oil Co. et al. Docket Nos. G-12121 et al. May 9, 1958.*

The commission made substantially the same ruling in another case involving similar facts and issues respecting proposed sales of gas from the Ridge area in southern Louisiana. *Re Sunray Mid-Continent Oil Co. Docket Nos. G-12211 et al. May 9, 1958.*



Hearing Required for Temporary Rate Increase Under Bond

THE Florida commission vacated its earlier order granting a temporary rate increase under bond to Southeastern Telephone Company pending investigation. At the same time it upheld its earlier action in refusing to require the company to show cause why its service should not be improved prior to the rate hearing (PUBLIC UTILITIES FORTNIGHTLY, July 3, 1958, page 71).

Temporary Rate Increase

In discussing its earlier order allowing a temporary rate increase, the commission observed that one difficult problem is that of seeing that the state's public utilities maintain a sound financial position to enable them to attract new capital with which to expand and improve their facilities to meet the ever-increasing demand for service. It recognized that the tremendous growth of Florida "imposes a costly burden on public utilities in keeping pace with population increases, industrial development, and expanding commercial enterprises."

The commission also noted its responsibility to the public in helping to maintain adequate and sufficient public utility service in order that the state may "continue to lead the nation in attracting new resi-

idents, industries, and business." In authorizing the temporary increase under bond, the commission had felt that it was meeting its responsibility, not only to the company, but also to the public in a way that would protect all interested parties from serious injury during the period which would necessarily elapse before a final determination could be made on the company's application for a rate increase.

Hearing Requirement

The commission said that apparently it had misconstrued the purpose and intent of the cities' request for an order directing the company to show cause why telephone service to its customers should not be improved before a hearing on the application for a rate increase. It said that what appeared to be primarily a concern over the quality of service now appeared to be an even greater concern over the level of the rates. The procedure followed by the commission, in all probability, would have led to a more expeditious improvement in telephone service but it did not afford the public an opportunity to be heard on the level of rates.

The commission held that when the cities' request is construed as a protest against the rates themselves, then they

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should have had an opportunity to be heard, even though the increased rates were for a temporary period and under bond. In misconstruing the request, the commission believed that it had deprived the cities of their right to be heard. It corrected this situation by vacating the temporary rate order.

Concurring Opinion

Commissioner Jerry W. Carter, in a special concurring opinion, pointed out that the original rate order had been issued during his absence, and that he had not had an opportunity to discuss or vote on the emergency rates under bond. He said that he would not have voted for it because he believes that the "public should have been heard." He said that he has "seldom seen any emergency in rate matters which justifies hasty action by a regulatory agency without first giving the public a right to be heard."

Chairman Alan S. Boyd, however, dissented on the ground that the temporary rate increase was in the public interest and that the commission had authority to act as it did.

Service Improvement Factor

In refusing to set aside its earlier order denying the request for an order directing the company to show cause why its service should not be improved before a hearing on its application for a rate increase, the commission again referred to Florida Teleph. Corp. *v.* Carter et al. (3 PUR3d 145).

It said that so long as the court decision stands, it may not condition a rate increase on an improvement in service and that it cannot withhold a hearing on an application for a rate increase pending such an improvement. *Re Southeastern Teleph. Co. Docket No. 5364-TP, Order No. 2618, May 29, 1958.*



Transportation of "Commuter Club" Members under Contract Not Public Utility Service

THE Delaware commission held that it had no jurisdiction over the motor carrier transportation of members of a commuters' club under contract and that such transportation did not constitute public utility service requiring a certificate. The carrier transports members of the club between a railroad station and other specified points to an office building of the duPont Company. All passengers have this common destination. Under the contract the bus drivers do not collect any fares or tickets. Only those persons authorized by the club are permitted to ride.

The Commuters Club is a private voluntary organization composed of persons employed by the duPont Company and assigned to work at the building. The

duPont Company has no connection with the organization. There are two types of memberships, a fully active membership which requires such members to buy a monthly commutation ticket and a daily membership which permits a member to pay only when and as he or she rides. Each type of membership requires the payment of an enrollment fee.

Method of Payment

The bus company does not collect any money individually from the members of the club. Rather, it is paid by that organization once each month in advance at the rate of \$9 per business day. This is a guaranteed amount, completely independent of the number of passengers. The carrier did

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not actively solicit the business. In fact, the initial contact was made by a member of the club. Furthermore, the carrier did not advertise directly for this type of transportation. Consequently, the commission concluded that the carrier was not a common carrier.

Competition Factor

This case had come before the commission at the instigation of a common carrier objecting to unauthorized competition. The commission pointed out that it does not matter, in and of itself, whether a corporation will take business away from another corporation which is clearly a public utility. The fact that a corporation will actually offer limited competition to an established public utility does not make it a public utility.

Service to Nonmembers

It was disclosed at the hearing that the bus company had on occasion transported persons who were not members of the club. The commission was convinced, however, that this came as a surprise to the owner of the carrier, and that it was done against his instructions. On the few occasions when this occurred there was a compelling reason which at the time seemed to justify transportation, and it was done with the approval and upon the instructions of the club, but without collecting any fare from such persons. The driver was not aware of the presence of these nonmembers.

The commission cautioned that although it did not hold the carrier responsible for the transportation of these nonmembers it should not be assumed that it approved of such transportation. It warned the Commuters Club that it might some day bring itself within the definition of a public utility, especially if it provides transportation facilities to the indefinite public. Common carriers only. Common carriers, it

Scope of Regulation

There was no regulation of public utilities in Delaware until 1949, when the commission was created. At that time the commission was given power to regulate public utilities under the Public Service Commission Act. This act, the commission said, is subject to strict construction and if there is any real or serious doubt as to whether a certain type of operation is within or without its jurisdiction, the doubt should be resolved against such jurisdiction.

The statute provides that no company shall begin business as a public utility, nor shall any public utility extend its business operations without first obtaining a certificate from the commission. The statute defines a public utility as including every corporation that operates, within Delaware, any motorbus system or equipment "for public use." There is no statutory classification or definition of motor carriers as such. They are, therefore, subject to regulation to the extent that they are "public utilities" within the meaning of that term as defined by the statute.

Test of Utility Status

The key to a determination of whether a particular type of operation is a "public utility" is found in the statutory phrase "for public use." In other words, said the commission, it is necessary that the bus system or equipment be operated for public use in order for it to be a public utility. Under the statute, the only carriers which can operate for public use are common carriers.

The statute does not recognize contract carriers as a class, but classifies carriers either as common or private.

The commission held that the law does not give it jurisdiction over contract motor carriers but authorizes it to regulate com-

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said, are those whose operations are indiscriminately open to the use and service of all members of the public who may require them, to the extent of the capacity

of such carriers. *Hill's Jitney Service, Inc. (Delmar Coach Service) v. Stiltz, Inc.* Docket No. 231, Order No. 422, May 28, 1958.



Increased Message Toll Rates

A TELEPHONE company's application for increased rates, tolls, and charges for intrastate message toll service was approved. The Indiana commission commented that the new rates would produce additional revenues while avoiding increases in initial period rates for the basic more widely used station-to-station service.

The proposed changes and revisions would principally affect those types of calls

upon which increased costs had had their greatest impact, such as person-to-person calls, and were consistent with the principle that customers for whom the more costly services are rendered should pay the costs incurred in rendering such services, rather than customers generally being required to pay such costs through higher rates for the more basic services. *Re Indiana Bell Teleph. Co. No. 27493, April 3, 1958.*



Certificate Covers Too Much Territory

A CERTIFICATE authorizing motor carrier operations throughout New Mexico was entirely too broad, in view of limited evidence showing a need for the service in only two counties of the state, the New Mexico supreme court ruled. The commission's order granting the certificate was appealed to the high court by a protesting carrier who held similar statewide authority. He contended that he was furnishing adequate service and that the evi-

dence did not sustain the new authority.

While the evidence before the commission would sustain authority to operate in two counties, the court observed that it could not approve the certificate in part and disapprove it in part. A certificate must stand or fall as it is written. The court therefore ordered the certificate to be canceled. *National Trailer Convoy, Inc. v. New Mexico State Corp. Commission*, 324 P2d 1023.



Garbage, Garbage Everywhere—But Only One Franchise (Commission Says "Phew" More)

THE Montana commission was faced with an interesting situation when it passed upon an application for a certificate to transport garbage as a class C carrier. The applicant had been awarded an exclusive franchise by the city of Missoula after the municipality had revamped its garbage disposal setup, replacing the four

carriers previously handling collection with the one franchise contract.

Armed with the exclusive contract, the carrier applied to the commission for a certificate, found, to its chagrin, that franchises did not result in ipso facto issuance of the certificate.

The commission pointed out that gar-

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bage transportation comes within its regulatory powers, that it had consistently held that motor carriers who transport garbage for hire must first obtain a certificate. The police powers of a city must yield to the statutory authority of the commission when such powers conflict with the general laws of the state regarding regulation of motor carriers. The city's new garbage ordinance, and the contract authorized by it, did not nullify any of the requirements of the Motor Carrier Act.

Commission Powers Not to Be Delegated

The applicant contended that mere designation by the city as its exclusive garbage hauler ipso facto entitled him to a certificate. The commission replied that it alone had been vested with authority to supervise and regulate motor carriers for hire. If a certificate were issued without examining the adequacy of existing service and determining whether public convenience and necessity required the issuance, the commission would be delegating to the city those powers which the legislature had vested in it. The city could terminate its contract with the applicant at some future time and designate another carrier as its exclusive hauler. The commission would then have to issue a new certificate whenever the city changed carriers. This would constitute a transfer of the board's discretionary powers to the city. Although the commission pointed out it did not adhere to the proposition that a certificate confers upon the motor carrier the right to enjoy a monopoly in a specified field of transportation, it was a long-standing policy that carriers providing the

public with satisfactory and adequate service should be protected against undesirable or unnecessary competition. The applicant had not met the burden of showing that existing service was inadequate.

The commission distinguished the interests of the city as a government unit from the interests of the whole public. To the customers, the garbage rate would be the same regardless of which applicant did the collecting. Present haulers had been giving satisfactory service. They had taken steps to provide centralized service and allow customers to deal with one agency. Present haulers also had plans to establish a new dump ground.

Municipal Powers Distinguished

The commission made it clear that its action did not constitute interference in the municipal affairs of the city. The commission would be extremely reluctant to impede the workings of a city government or any other agency, it said. The city had full power to regulate the collection or disposal of garbage. It also could impose reasonable regulations upon the transportation, such as requiring transportation in covered vehicles.

The commission's only requirement was that the city deal with certificated carriers. The city could not hire a physician who was not licensed to practice medicine in the state; it could not hire an attorney who was not admitted to the Montana bar; likewise it could not hire a motor carrier who was not authorized to conduct the proposed transportation. *Re Carroll, Docket No. MC-1168, Order No. 1271, March 3, 1958.*



Compromise of Undercharge Claim Denied

THE California commission denied a carrier's application for authority to compromise a disputed undercharge claim.

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The carrier held Radial Highway Common Carrier, City Carrier, and Petroleum Irregular Route Carrier certificates. It had

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been billing a steel company in accordance with a rail-compelled rate on the understanding that the company had the use of a rail spur facility at its plant. Later, the carrier discovered that the customer was not served by a rail spur, so that the truck rate tariff was the applicable one.

The customer, upon receiving the \$5,-662.70 bill for undercharges, took the position that there was a defense to the claim for undercharges in that certain of its competitors located in the immediate vicinity were receiving the advantage of the rail-compelled rate, and that it was induced to accept the transportation of the carrier through representations that such rate was applicable. Payment was refused, but a compromise offer of \$4,334.79 made.

The carrier, in applying to the commission for permission to accept the compromise payment, contended that there was "an air of plausibility" to the defense of the steel company which might preclude

a recovery of the undercharges in a court of law. Furthermore, the cost of instituting and conducting such a suit would be far greater than the difference between the claimed undercharges and the offered compromise.

The commission pointed out that the carrier was subject to the minimum rate tariff prescribed and could not charge less except upon authority of the commission. Although there had been no intention on the part of the applicant to create a deviation from the general rule of law, and the commission was aware that the sum offered as a compromise was not disproportionate to the amount of the undercharges, the commission was reluctant to permit the compromise until an action looking toward the recovery of the full amount had been commenced in a court of competent jurisdiction. *Re Booth (Booth Transportation) Decision No. 56445, Application No. 39489, April 1, 1958.*

Other Recent Rulings

Gas and Steam Rate Increases. Baltimore Gas & Electric Company obtained from the Maryland commission moderate rate increases for its steam and gas service, pending final determination of the case, upon a showing that the company's rate of return for these services would not even approach the allowable 6 per cent established by the commission; but withdrawal of a suspension of a proposed electric rate increase was denied since it would result in a return substantially higher than 6 per cent. *Re Baltimore Gas & E. Co. Case No. 5554, Order No. 53385, April 24, 1958.*

Delegation of Power. The Oregon supreme court, in a negligence action, held

that the commission had no right to adopt prospectively as a part of the electrical safety code of the state, without hearing or further consideration, subsequent changes approved by the Bureau of Standards in the National Electrical Safety Code. *Hillman v. Northern Wasco County People's Utility Dist. 323 P2d 664.*

Stock Acquisition. The Wisconsin commission authorized a natural gas company to acquire stock of an affiliated company engaged in the propane gas and bottled gas business, a nonutility operation, where the gas company intended to pay for the stock out of surplus earnings belonging to its common stockholders, the bottled gas business being similar to the gas utility opera-

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tions. *Re Wisconsin Southern Gas Co. 2-U-4999, May 16, 1958.*

Rate Discrimination. The Wisconsin commission held that it is discriminatory for a small rural telephone company to charge the same rate for rural business and rural residence service. *Re Montpelier Teleph. Co. 2-U-4975, May 29, 1958.*

Telephone Service on Air Force Base. The North Dakota commission held that it has no jurisdiction over the proposed construction and operation of a telephone system on a United States Air Force base to serve the residential and commercial establishments thereon where the proposed facilities will be located wholly on the base and the cost of construction will be financed by a loan from the Rural Electrification Administration. *Re Souris River Teleph. Mut. Aid Corp. Case No. 5414, May 26, 1958.*

Telephone Rate Increase. The Connecticut commission authorized the New York Telephone Company to increase rates to a level calculated to yield a return of about 5 per cent on the theory that such rates would be no more than just and reasonable. *Re New York Teleph. Co. Docket No. 9623, May 5, 1958.*

Certificate Extension. The New York commission held that as long as a certificated motor carrier continues a bona fide operation as such, infirmities in its certificate should be, in the public interest, corrected by extending its authority to enable it to render a more efficient and economical service. *Re S. B. Hamilton Trucking Co. Case MT-2850, May 26, 1958.*

Railroad Station Requirement. The California commission held that the mere fact that a railroad's tracks run through a

town does not require it to maintain in such town a station building and a local agent for the purpose of the town's prestige where there is no need for the station or the agent in connection with the transportation of freight. *Re Southern P. Co. et al. Decision No. 56777, Application No. 39662, May 27, 1958.*

Limited Motor Carrier Service. The Kansas court of appeals held that where a certificate issued to a railroad for truck service auxiliary to its railroad service provided that the railroad should not serve any point not a station on its lines, the truck line was not entitled to make store-door pickup and delivery service in towns in which the railroad had depots. *Missouri ex rel. Missouri Pacific Freight Transport Co. v. Missouri Pub. Service Commission (1958) 312 SW2d 363.*

Telephone - answering Service. The Wisconsin commission held that it has jurisdiction over telephone - answering service companies only to the extent that a company is acting as an agent of a telephone company, and if the answering service is to be permitted to complete a call when the called party is at a phone at another location, the rate charged should be filed. *Telephone Answering Service v. Wisconsin Teleph. Co. 2-U-4741, May 15, 1958.*

Gas Producer Rates. The Federal Power Commission held that it did not act discriminatorily in suspending rate increases over 10 cents per Mcf proposed by natural gas producers of high quality gas in the Permian basin area though it did not suspend increases under 10 cents proposed by producers of lesser quality gas in the same area; such action was consistent with the commission's policy of suspending increases over 10 cents in the

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basin when not supported by cost data. *Re Humble Oil & Refining Co. Docket Nos. G-13729, G-13938, May 15, 1958.*

Conditioning of Certificate. The Federal Power Commission pointed out that the attachment of conditions to orders granting temporary authorization under the Natural Gas Act is as proper as the imposition of conditions upon the issuance of a permanent certificate. *Re Sunray Mid-Continent Oil Co. Docket Nos. G-13298 et al. May 9, 1958.*

Evidence Supports Gas Order. The Federal Power Commission refused to reopen a certificate proceeding and rescind an order alleged to have been issued without supporting evidence, where the order, which authorized sales of natural gas to specific companies, was based on estimates of gas requirements for the Columbia System in which the company served. *Re Transcontinental Gas Pipe Line Corp. et al. Docket Nos. G-12059 et al. May 15, 1958.*

Power for Canada. Superseding prior authorization, the Federal Power Commission authorized Niagara Mohawk Power Corporation to transmit up to 300 million kilowatt-hours of electric energy per year to Canada, upon finding that such transmission would not impair the power supply in the United States or impede the co-ordination of facilities in the public interest. *Re Niagara Mohawk Power Corp. Docket No. E-6797, May 15, 1958.*

Carrier Operating Authority Suspended. The California commission, finding that a carrier had consistently been following a course of improper conduct in that it had assessed charges based upon consolidated multiple-lot shipments when the shipments actually constituted separate shipments and should have been rated as

such, suspended the operating authority between the two points of most frequent violation for a period of five days, as well as to shippers for which violations had been found for a period of forty-five days. *Re Merchants Express of California, Decision No. 56553, Case Nos. 5903, 5904, April 15, 1958.*

Equipment Leasing Rule. The Florida commission amended its rules governing household goods carriers to eliminate tripling and require that motor vehicle leases be for a term of at least ninety days unless to replace motor vehicles disabled or undergoing repair and in order to complete the transportation of a shipment originally destined to move upon such disabled vehicle, and to include a provision that a vehicle under lease to a certificated household goods carrier should be used for no other purpose than the business of the certificate holder during the term of the lease. *Re Rules and Regulations Governing Household Goods Carriers, Docket No. 3253-CCT, Order No. 4241, April 4, 1958.*

Denial of Agency Station Discontinuance. The Louisiana commission denied a railroad's request for permission to discontinue an agency station where only a slight loss was being suffered, concluding that continued operation would not constitute such a drain upon the carrier's resources as to override the demonstrated public need for operation. *Ex Parte Gulf, M. & O. R. Co. No. 7497, Order No. 7457, March 11, 1958.*

Exhaustion of Remedies. The United States court of appeals held that motor carriers alleging exemption from the provisions of the Interstate Commerce Act did not have standing, under the Declaratory Judgment Act, to have the court de-

PUBLIC UTILITIES FORTNIGHTLY

fine the rights and relationships of such carriers with respect to other carriers subject to the act which had filed rates with the commission but which were alleged to have disregarded such rates and charged less, until the carriers had exhausted administrative procedures contained in the act. *St. Germaine et al. v. Alamo Motor Lines et al.* 252 F2d 10.

Passenger Train Discontinuance. The Colorado commission authorized a railroad to discontinue passenger train service where public demand or necessity for continued service no longer existed, alternate facilities would be provided for railroad personnel, and the matter of requiring a stand-by service for weather emergencies induced a performance responsibility to which the commission did not prescribe. *Re Union P. R. Co. Application No. 15783, Decision No. 49999, April 8, 1958.*

Motor-for-rail Certificate. The United States district court held that a certificate for substituted motor-for-rail service may be granted either to a wholly owned motor carrier subsidiary of a railroad or to an independent trucker with whom the railroad contracts for supplemental service. *Sites Freightlines, Inc. et al. v. United States et al.* 158 F Supp 909.

Free Unloading Time. The United States district court held that an Interstate Commerce Commission emergency car service order prohibiting carriers from allowing more than seven days' free time for unloading boxcars at ports reduced the free time for the storage of grain in railroad cars at a certain port from twenty days to seven, notwithstanding a tariff filed by the railroad with the Interstate Commerce Commission providing that

grain consigned to the port elevators would be held in cars without charge for storage for twenty days. *Reading Co. v. Commodity Credit Corp.* 159 F Supp 67.

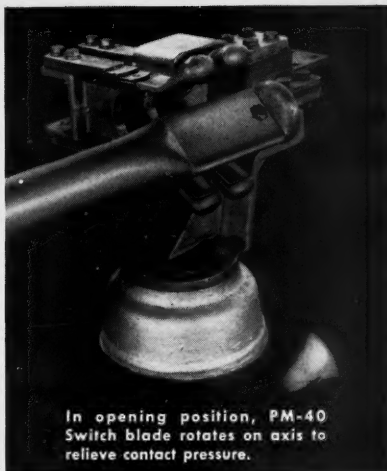
Passenger Train Consolidation. The Illinois commission granted a railroad's application to consolidate certain trains upon a showing that the trains had been operating at a substantial deficit, that passenger patronage had been steadily declining, operating costs had been steadily rising, that the elimination of the annual out-of-pocket loss would improve the railroad's operation, and that other modes of transportation were available. *Re Gulf, M. & O. R. Co. No. 44632, April 10, 1958.*

Voter Preference as Factor. The Montana commission, in granting a municipal water plant a 43 per cent increase instead of a 55 per cent increase requested, commented that the fact that the municipality had informed voters that approval of a bond issue would require a 55 per cent increase in water rates, and that the bond issue had been approved, which the municipality construed as a voter endorsement of the 55 per cent increase, did not preclude the commission from inquiring into the merits of the application, since the commission's function is to protect ratepayers against excessive rates and to authorize only revenues required for sound operation. *Re City of Helena, Docket No. 4624, Order No. 2711, April 8, 1958.*

Extended Area Service Authorized. The California commission ordered extended area service between the Fresno exchange and several surrounding community exchanges, with rate adjustments to offset resulting revenue reductions. *Re Pacific Teleph. & Teleg. Co. et al. Decision No. 59728, Case No. 5928, May 27, 1958.*



PM-40 Double-Side-Break Switch features easy-rotating blade, high pressure silver-to-copper contacts, factory-sealed insulator bearing, and heavy duty construction. Voltage ratings, 115 to 330 KV; 600 to 1600 amperes.



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PM-40 contacts are straight-line current path de-

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PUBLIC UTILITIES FORTNIGHTLY—JULY

by
JOHN A. HOGG
 Director, Administrative
 Services Department
 Atlantic City Electric
 Company

PUNCHED CARD

Automation!

How Atlantic City Electric, Aided by Electronic Brains, Works Wonders in Making Accounting Facts and Figures Quickly Available for Statistical and Reporting Purposes!



CTs are stubborn things, but utilization management can squeeze a good more knowledge out of its accounting system by putting punched-card automation to work.

Atlantic City Electric Company have organized our accounting system with an electronic computation program which will eventually tie all accounting into a unified system accessible for statistical and reporting purposes.

Automation at our company had its roots in the tremendous growth over the past decade which outmoded previous methods and threatened to bog down our paper work functions. New management took over in 1948, after the company was separated from the American Gas and Electric Company system. Unprecedented expansion, spiraling costs in the following years, created paper work problems.

In March of 1955, we made the move installing a Remington-Union 120 Punched-Card Electric Computer and related equipment. The first stage of the program consisted of converting as many accounting functions as possible to punched cards to absorb the volume of the quickly and develop experience

in the equipment's potential.

While we knew our ultimate goals, with respect to automation, we believed the best approach was to work on each of the operations individually, keeping in mind the coordination and integration necessary to achieve the final goal. This final coordination would come after the following accounting operations had been mechanized:

1. Customer Billing and Receivables
2. Payroll
3. Stores
4. Accounts Payable
5. Construction and Continuing Property Records
6. General

In addition to these specific accounting functions, we plan to place the meter and transformer history records on punched cards. These records represent one of the largest volume operations in the company, second only to the billing operation. The automation of the history cards will serve a dual purpose of providing operating records for our operating departments and at the same time, through the placing of unit costs in the cards, serve as supporting detail for the con-

tinuing property records. The programming of the meter and transformer history record automation is under way at the present time and the studies are substantially completed. The actual transition from hand kept records to punched cards will not take place until all of the accounting phases of automation have been completed and placed in service.

Punched-card meter records will produce the information required to conduct periodic tests of two hundred thousand meters over an eight year period. Tabulated results of tests for regulatory bodies, listings of meter values to support the continuing property records, records of meters in and out of service, and the variety of statistics required for efficient operation of the Meter Department can be easily produced from punched cards.

Of the six accounting functions the first four are virtually completed, with the exception of centralization of Accounts Receivable. Thus far the billing has been completely centralized but receivables have been left in our twelve local offices serving the three hundred communities of Southern New Jersey where we operate. Early attempts at centralizing the receivable

operation, at the time we were converting billing to punched cards, turned up detail problems which caused us to draw back and study the matter further. During 1957, the system for centralization of Accounts Receivable was fully worked out and we are proceeding with the centralization over an eleven month period starting January 1958.

Customer Billing and Receivables

The customer billing was started in the summer of 1955, and has been done entirely on punched cards for some time. Billing 200,000 accounts monthly on key-driven accounting machines was becoming more and more cumbersome with every increase in the size of our operations and deriving important statistical data from the billing information required a tremendous amount of labor.

Today we start at the same point as before—the Meter Books—but there the similarity in the operation ends. Where it used to be necessary to make as many as 12 passes through the book for as many different rates, all accounts can now be punched in order. The present reading, "To" date, and number of days in the billing period are pre-punched into a computation card carried over from the previous month. Ledger cards and bill forms are printed and addressed by plate. When they reach the Data Processing Department the account number is immediately punched into the ledger card. We put the computation cards

through the Univac 120 to compute the current month revenue. The cards are then merged with the ledger card file and the deck is again passed through the computer to accumulate the revenue to each customer's ledger. The information from the ledger card is then automatically punched into the current bill card which is then reduced to post card size for mailing. The bills and matching ledger cards go to the business offices where the bills are mailed to the customers and the ledger is retained as a record of the amount due from the customer. Meanwhile, our Data Processing Department reproduces the computation cards for the next month's billing, placing the previous month's computation information in the proper card columns.

Under the centralized system now being installed, the business offices will not maintain any ledgers and the bill mailed to the customer will contain the account number and amount punched in the cash stub portion. When the remittance is received from the customer, together with the punched stub, the stub will be reproduced to a full size card and automatically re-entered into the Data Automation System for posting to the customer account. For answering customer inquiries and other transactions with customers, the business offices will retain accounts receivable listings and daily listings of cash received in account number order. These listings will be produced by the Data Processing Department as a by-product of the

billing and cash posting operation. In addition, delinquent notices will be produced automatically when collection action is necessary.

Many statistical reports, such as monthly revenue analysis and block analysis, are derived from computation cards. It is possible to obtain a great many breakdowns to provide sales promotion, load study and other information required for operating purposes.

Payroll

One of the first jobs applied to the Univac was the payroll operation. The payroll operation has been completely automatized from the recording of the time report in the Data Processing Department until the preparation of the W-2, Annual Statement of Employee's Earnings for tax purposes. The computation of gross net pay, preparation of payroll checks, distribution of labor dollars to department accounts, preparation of fringe and employee benefit reports, statistical analysis of other data on employees, employment earning statements, job function and department information, (and statistical summaries of earnings) are all produced automatically through the use of punched cards and electronic computing equipment. The payroll system has many phases which give us a variety of statistical reports but this resume shows the facility with which computations are made and the vast amount of data available to us in card form.

The conversion of the payroll function to punched-card equipment has provided us with a means for gaining immediate experience in operating this equipment and also enabled us to transfer Payroll Department personnel almost en masse to the Data Processing Department to provide a nucleus of employees. The conversion of the centralized billing function to punched-card equipment enabled us to continue to expand the Data Processing Department through the transfer of employees until the department reached the strength at which it can be most efficiently operated.

While our initial plans envisioned the conversion of all customer billing and centralization of accounts receivable simultaneously, we found this approach to be impractical, and as previously mentioned we drew back from the centralization of accounts receivable for further study and completion of the conversion of the billing operation. To absorb the machine and employee time made available through not centralizing receivables we



Remington Rand Punch is the starting point of Atlantic City Electric's automation, translating a variety of accounting data into punched cards.

lately embarked on the conversion of the store accounting operation to punched-card and electronic equipment. The programming of this function was expedited and in the short run of three months, in the Spring of 1956, the program was developed and conversion started. The conversion lasted approximately four months and was completed by September of the same year.

Stores

The stores program provides for maintenance of materials and supplies on a centralized basis. All issues and returns from the storerooms are posted electronically on a centralized basis. Trial balances are produced periodically for review by the storekeeper. A system of inventory and cycle counting has been established in order to provide the necessary control of physical quantities. The system provides for the charging and/or crediting of issues and returns from storerooms to the proper construction and operating accounts much in the same manner as the labor disbursement. Also incorporated in this program is a computer program for determining the cost of minor miscellaneous material and stores expense as a major material cost in order to eliminate the many calculating operations previously followed to arrive at the issue cost of materials and supplies. The program incorporated minimum maximum stock levels on critical materials in order to provide a basis for automatically recording with continual physical counts. While the program is virtually complete, we are still studying means of reducing the time required for input of source documents.

Accounts Payable

One of the most interesting operations which has been mechanized is the accounts payable. Our initial studies indicated that the work volume would support a completely tabulated operation, but the volume was sufficient to warrant some degree of mechanization. Experience showed that the method of handling payments to vendors was on a daily basis rather than the cumulative standard payment used by many companies. In addition, management required that a reference advice be attached to each check in order to eliminate questions of correspondence, and copies of the check be produced for filing and accounting purposes. While the only

answer to requirements of this type was a bookkeeping machine, we still wanted the rapid handling of account distribution and statistical information which would be achieved through use of the punched cards.

The system incorporated a standard bookkeeping machine intercoupled to a Punch, to produce the required tabulating cards as a direct by-product of the account listing and writing of checks to pay vendors. The cards can be merged with the cards produced in other accounting operations to achieve the goal of punched-card ac-

counting and still allow the Accounts Payable Department to operate independently in a manner which will permit the absorption of the accounts payable volume at the required times.

Construction and Continuing Property Records

The success achieved thus far has encouraged us to proceed with our programming for construction accounting, continuing property records and general accounting. While the detailed objectives of the programs have not been defined, our initial studies

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Rights, evidenced by Subscription Warrants, to subscribe for these shares at \$52 per share have been issued by the Company to holders of its Common Stock of record June 17, 1958, which rights expire July 8, 1958, as more fully set forth in the prospectus.

The several Underwriters have agreed, subject to certain conditions, to purchase any unsubscribed shares and, during and after the subscription period, may offer shares of Common Stock as set forth in the prospectus.

Copies of the prospectus may be obtained from any of the several underwriters only in states in which such underwriters are qualified to act as dealers in securities and in which the prospectus may legally be distributed.

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June 24, 1958.

INDUSTRIAL PROGRESS—(Continued)

have enabled us to determine the more important results which we wish to achieve.

In laying out the broad concepts of the construction accounting program, we are looking forward to developing a posting system whereby source documents such as stores issue cards, labor distribution cards and accounts payable cards can be merged after they have performed their initial functions in order to produce a complete punched-card construction accounting record. We are also studying the means of achieving automatic distribution of costs such as interest during construction and construction overhead to work orders. As a final step in the construction accounting program, we are going to attempt to automatically develop unit of property costs as a by-product of closing work orders in order to produce the source entries for our continuing property records. The unit of property cost will consist of major items of material to which have been added the non-identifiable or waste material cost, the installation labor, and indirect costs such as stores expense, interest during construction and general overhead to come up with an installed cost of each unit of property.

Our planning for the continuing property records has progressed to the point where we have defined the units of property which will support our primary plant account balances and our balance sheet plant total. These

units of property will contain all of the statistical information which is required throughout the year. Location codes will be provided so that property can be tabulated by cities, towns, and taxing districts for mileage and tax reports. Unit code numbers will be provided for sorting out common items of material and tabulating them by account number, thereby providing automatic account balancing. Units of measurement, quantities, unit cost and total cost will be included and a system will be devised so that units of property can be added to and deducted from the balances and new unit costs computed through use of the punched-card and electronic computing equipment. We are hopeful of providing more statistical information on our property by kind, size, location and cost than has ever been provided in the past.

General Accounting

The primary objective of our general accounting program is to develop automatic posting for our operating and other subsidiary ledgers. As we envision it, the system will also use the cards produced as a by-product of our stores accounting, labor and accounts payable operations as source documents for automatic posting. One of the primary program problems is developing a method of creating journal entries with punched cards as a by-product. For this operation, we are looking toward typewriters and book-

keeping machines with punched-card attachments. Once we have achieved the initial objective of placing general accounting operation on punched-card and computing equipment, it is our plan to broaden operation to apply the elements of responsibility accounting. Through establishment of account codes and type of cost codes, we will develop costs within the account framework which can be reported to the section officers responsible for the operation of various company functions. We are of the opinion that the statistics provided through these operations will permit the responsible officers to operate their sections in the most efficient manner.

What the Atlantic City Electric Company has accomplished thus far is a clear indication of how facts can be put to work for management. These accomplishments have led us to establish a very ambitious program for the next two years and we believe the final goal will produce a computing system for Atlantic City Electric Company which will be among the outstanding in the country.

Contracts Awarded for Construction Of Enrico Fermi Atomic Plant

CONTRACTS for design and manufacture of the core of the giant Enrico Fermi Atomic Power Plant now under construction near Detroit have been awarded to Nuclear Metals, Inc. and the D. E. Makepeace Division, Engelhard Industries, Inc., it was announced recently.

P.U.R. QUESTION SHEETS

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...affiliate of Arthur D. Little,
...and Allegheny-Ludlum Steel
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...al capacity of the Fermi Power
...will be 100,000 kilowatts. Later,
...be stepped up to 156,000. In
...rison, the atomic power plant
...uilt at Shippingport, Pa., will

have an initial capacity of 60,000 kilo-
watts, which can be increased to 100,-
000.

Barber-Greene Announces Model 702-A Rubber Tired Ditcher

BARBER-GREENE Company, of
Aurora, Ill., has just announced their
new Model 702-A rubber tired Ditch-
er, a highly mobile unit designed for
narrow trenching in the fields of
underground placement of gas and
electric lines; telephone and other
communications systems; lawn and
golf-course sprinklers, etc. The new
702-A succeeds the Model 702 which
has enjoyed widespread use by utili-
ties companies, municipalities, rail-
roads, telephone suppliers and others.

Designed to dig a maximum of 40
in. deep, the 702-A may be equipped
with either a Chisel tooth bucket line
digging either 3 or 5 inches wide; or
a Hook tooth line digging 3½ or 5
inches wide. This choice of bucket
lines makes the machine readily adapt-
able to a wide variety of underground
soil conditions.

Specifications and information on
the new Model 702-A Ditcher may be

obtained from any Barber-Greene dis-
tributor; from Barber-Greene Com-
pany, 400 No. Highland Ave.,
Aurora, Ill., or from Barber-Greene
Canada, Don Mills, Ontario.

Exide Publishes Manual on Power Plant Storage Battery Use

A DETAILED technical manual on
use of stationary storage batteries in
electric utilities has been published by
Exide Industrial Division of The
Electric Storage Battery Company.

The 24-page manual, Bulletin 210,
has the first reports on recent engi-
neering studies of the effect of tem-
peratures on battery capacity and in
addition provides tabulated data, and
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selection of batteries and charging
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Indexed and organized for convenient reference, Bulletin 210 is punched for insertion in standard three-hole binders. Copies can be obtained from Exide Industrial Division, The Electric Storage Battery Company, Box 8109, Philadelphia 1, Pa.

G-E to Supply Germanium Rectifier Assemblies on Metal-Clad Equipment

GERMANIUM rectifier assemblies that eliminate field adjustments and rectifier aging problems are now being applied for A-C closing of magnet-blast circuit breakers on metal-clad switchgear equipment manufactured by General Electric's Medium Voltage Switchgear Department.

Designed for both utility and industrial applications, the germanium rectifier assemblies replace the conventional copper oxide assemblies.

The much lighter and more compact germanium assemblies are hermetically sealed for protection against atmospheric conditions. In addition, rectifier output is affected little by temperature change.

According to Department engineers, the new germanium assemblies are being used on all metal-clad switchgear equipments.

G-E Plans to Construct \$1,000,000 High Voltage Laboratory

GENERAL ELECTRIC Company plans to construct a new \$1,000,000 High Voltage Laboratory in Philadelphia, according to an announcement by V. L. Cox, manager-Laboratories Department in the Company's Switchgear and Control Division.

Construction of the new laboratory will begin immediately with completion scheduled for July, 1959.

The new laboratory will have facilities for testing switchgear products rated 750,000 volts and higher. It will contain testing equipment which will simulate overvoltage conditions produced by lightning and other dynamic overvoltages which occur on transmission and distribution lines of electric power companies.

The new research and development facility will be an addition to the \$10,000,000 Switchgear Laboratory which

was completed in 1952 for the circuit testing of circuit breakers, switches, contactors and other electrical power devices.

Announcement of the new facility is a part of "Operation Turn," General Electric's program to accelerate business recovery by bringing all company resources to action. Department officials expect capital spending of this type will further improve business conditions.

The new facility will complete the work to be done by the Extra Voltage Project announced this month.

"To continue the company's pioneering leadership in the switchgear business," said Mr. Cox, "it is necessary to have available testing facilities to perform research and development work, and to explore product performance in the high-voltage area under all conditions."

In the United States, seven electric power companies now have, or soon put high-voltage transmission lines in operation at 345,000 volts. The Europeans have five systems in operation at 420,000 volts in Sweden, Russia, France, Germany and Italy.

The Russians are now completing their 420,000-volt transmission system to 500,000 volts, which will be the highest operating a-c voltage in the world.

With shorter distances for transferring power in the United States, it is expected that the next higher transmission voltages will be 600,000 volts, and later 650,000 volts.

Stone & Webster Named Design and Build Central Elec. Generating Unit

CENTRAL Illinois Electric and Gas Co. has awarded a contract to Stone & Webster Engineering Corporation for the design and construction extension to their power generating plant in Rockford, Ill., estimated cost approximately \$11,000,000.

F. C. MacKrell, district manager for Stone & Webster in Chicago, said the 50,000 kilowatt plant, designated as Unit No. 4, of the Sabrook River project, is scheduled for completion in 1961.

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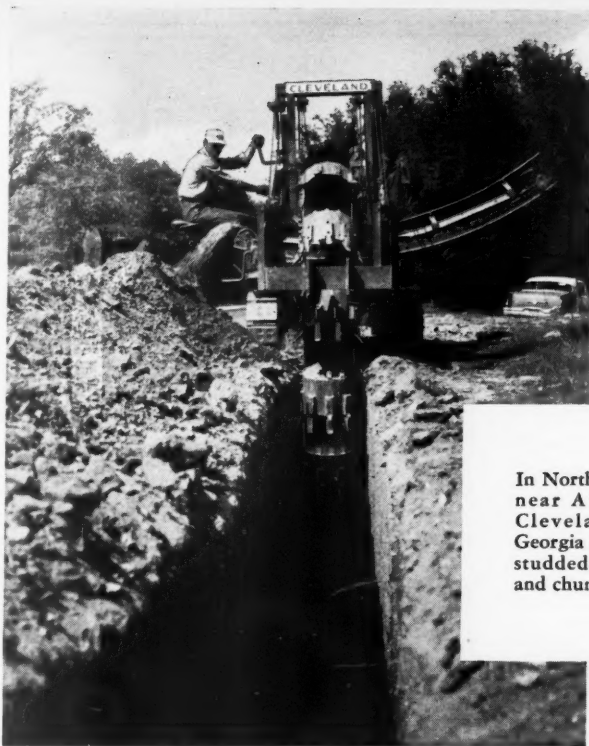
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breakers to leave Allis-Chalmers
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ky transmission lines which will
ply power to Central New York
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miles long.
the 138-kv side of Goodings Grove
oined with the Will county gen-
ing station and the Bedford Park
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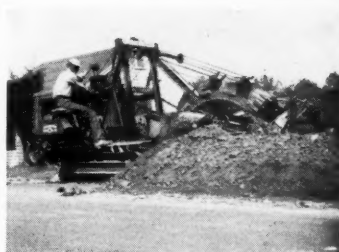


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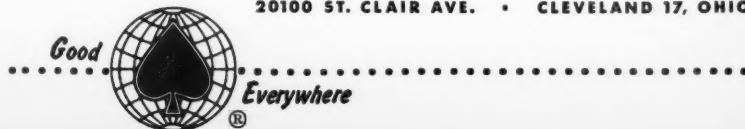
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